INDEX

SUBJECT

AUTHOR

CONTENTS FOR VOLUME 82

Index of Subjects

Volume 82, 1976

A23187
lymphocyte responses to, 65a
Achondrogenesis
in three sibling fetuses, 71
Achondroplasia
cervical myelopathy in, 4a
ACTH
secretion by transplantable pituitary tumors, 59a
Adenosine triphosphate
levels in disease states, 52a
Adrenal gland
cortex in renal hypertension, 143
glycoprotein synthesis in medullary cells, 61a
Adrenalectomy
and multiple risk factors in atherosclerosis, 71a
Alveoli, pulmonary (*see* lungs)
Amebic encephalitis, 86a
Amniocentesis
for cystinosis, 21a
for Fabry's disease, 13a
Amyloidosis
coagulopathy in, 87a
Aneurysms
aortic sinus, 419
Animal models
acute alveolar injury in dogs, 353
Australia antigen hepatitis in mice, 85
bronchitis, chronic, 237
Chediak–Higashi syndorme, 573
erythrocyte glutathione deficiency, 233
galactosamine-induced hepatitis, 393
gonorrhea, 437
melanoma, malignant, 441
respiratory syncytial virus infection, 339
spinal muscular atrophy, infantile, 649
Waterhouse-Friderichsen syndrome, 653
Antenatal diagnosis, 3a
of cystinosis, 21a
of Fabry's disease, 13a
α-1-Antitrypsin deficiency
liver in, 265
Aorta
calcification of root, 22a
medial cells affected by hyperlipemic serum, 70a
obstruction of, 424
transposition with pulmonary artery, 423
Aortic sinus
aneurysms of, 419
Aortic valve
stenosis of, congenital, 428
Aortico–left ventricular tunnel, 419
Aorticopulmonary window, 416
Asbestos
in tissues, electron microscopy for detection of, 89a
Aspirin
and platelet contractile waves, 513
and thrombus formation on artificial surface, 445
Asthma
and ultrastructural changes in lungs, 45a
Atherosclerosis
coronary, diet-induced, 68a
and effect of intermittent hypercholesterolemia, 82a
multiple risk factors in, 71a
regression of
cholesterol levels affecting, 69a
and giant membrane complexes in foam cells, 70a
and saphenous vein grafts, 71a
Australia antigen
and hepatitis induction in mice, 85
Autoradiography
of glycoprotein synthesis in adrenal medulla cells, 61a

BCG
and inhibition of pulmonary metastases, 75a
Bilirubin
conjugated hyperbilirubinemia in hyperalimentation, 13a
Biochemical disorders
laboratory studies of, 3a
Bladder
transitional cell carcinomas of, and desmosome frequencies, 31a
Blastoma
pulmonary, in infant, 90a
Bone
achondrogenesis in three sibling fetuses, 71
growth in tight-skin mice, 493
localized giantism, 90a
occipital malformation in dwarfism, 4a
Brain
lymphocyte reactivity with anti–human brain serum, 67a
phenobarbital affecting microtubules in, 19a
vasculopathy of
after cranial radiation, 20a
in lead intoxication, 18a
Breast
hormone receptors in cancer of, 74a
Bronchi
uranyl acetate affecting mucosa in organ culture, 46a

Bronchitis
chronic, animal model of, 237
from methacholine, 45a

Cadmium-metallothioneine
renal tubular effects of, 38a
Calcification
of aortic root, 22a
Calcium-binding protein
and renal lesions from vitamin D, 55a
Candidiasis
systemic, with chronic granulomatous disease, 16a
Capillaries
morphogenesis in wound healing, in diabetes, 58a
Carcinoembryonic antigen
immunocytochemical detection of, 74a
Carotid body
in sudden infant death syndrome, 29a
Catheters
thrombotic reactions to, 81a
Celiac disease
intestinal mucosa in, 13a
Cell cultures
liver, drug metabolism in, 47a
Chediak–Higashi syndrome
animal model of, 573
Cholangiocarcinoma
mucinous, experimental induction of, 37a
Cholesterol ester storage disease
liver in, 11a
Cholesterol levels
and effects of intermittent hypercholesterolemia, 82a
and regression of atherosclerosis, 69a
Chondrodystrophy
occipital bone malformation in, 4a
Chromosomes
detection of minute abnormalities in, 18a
Cirrhosis
and multiple risk factors in atherosclerosis, 71a
Coagulation
in amyloidosis, 87a
in galactosamine-induced hepatitis, 393
Colchicine intoxication
neutrophil inclusions in, 88a
Collagen
platelet interaction with, 129
synthesis of, and wound healing in diabetic mice, 58a
Colon (*see* intestines)
Complement
C3 receptors on macrophage membranes, 89a
and immune cytolysis
in herpes simplex–infected fibroblasts, 78a
protein A affecting, 64a
Connective tissue
growth in tight-skin mice, 493
mixed disease with muscle pathology, 28a
Contractile proteins
in cancer cells, 30a, 76a
Contraction
platelet, agents affecting, 513
Cor triatriatum, 431
Cornea
macular dystrophy of, tissue culture studies of, 61a
vascularization of, leukocytes in, 51a, 157
Coronary arteries
abnormal, 420
branch-angle studies, 27a
diet-induced atherosclerosis of, 68a
Cranial radiation
cerebral vasculopathy from, 20a
Cyst(s)
renal, steroid-induced, 373
Cystic fibrosis
fasciculus gracilis degeneration in, 5a
Cystinosis
in utero, 21a
Cytochemistry
of epididymis after vasectomy, 50a
immunocytochemical detection of carcinoembryonic antigen, 74a
of immunoglobulin in lymphoreticular neoplasms, 457
ultrastructural, of endocrine kidney, 527
Cytolysis
immune, complement-mediated
in herpes simplex-infected fibroblasts, 78a
protein A affecting, 64a

Dane particle
in Australia antigen serum, 85
Defibrillation
overdosed shocks in, effects of, 25a
Desmosomes
and bladder transitional cell carcinoma, 31a
Dextran
and thrombus formation on artificial surface, 445
Diabetes
and capillary morphogenesis in wound healing, 58a
and collagen synthesis in wound healing, 58a
streptozotocin-induced, 60a

Diagnostic methods
prenatal, 3a
Diet (*see* nutrition)
Drugs
metabolism in liver cell cultures, 47a
tissue reactions to, 617
Ductus arteriosus
patent, 415
Dwarfism
occipital bone malformation in, 4a
Dystrophy
of extraocular muscle, 101, 111

Elastin
alveolar septal, morphogenesis of, 42a
pulmonary, in elastase-induced emphysema, 42a
Electron microscopy
of achondrogenesis in three sibling fetuses, 71
of adrenal cortex in renal hypertension, 143
of alveolar elastica, 43a
of asbestos in tissues, 89a
black and white photographs converted into color, 85a
of cardiac muscle cell, 192
of endocrine kidney, 527
of endoplasmic reticulum of liver, 61
of fibromatosis, 84a
of gentamicin nephrotoxicity, 589
of glomerular lesions in lipoid nephrosis, 20a
of granulomatous disease in lung, 83a
of hyperlipemic serum effects on aortic medial cells, 70a
of ischemic intestinal muscularis, 315
of liver in α-1-antitrypsin deficiency, 265
of liver in cholesterol ester storage disease, 11a
of pancreas and liver in Reye's syndrome, 12a
of platelet interaction with collagen, 129
of renal tubules after methyl cadmium, 38a
of rhabdomyosarcoma, 1a
Emphysema
elastase-induced, lung elastin in, 42a
interstitial, and giant cell reaction in newborn, 6a
Encephalitis
amebic, 86a
Encephalomyelitis
experimental allergic, tilorone in, 381
Endoplasmic reticulum
of liver, 61
Epididymis
cytochemistry after vasectomy, 50a
Erythrocytes
glutathione deficiency in, animal model of, 233

Fabry's disease
antenatal diagnosis of, 13a
Fallot tetralogy, 421
Fanconi's syndrome
and hepatic glycogenosis, 16a
Fasciculus gracilis
degeneration in cystic fibrosis, 5a
Fatty acids
long chain, modification of, 69a
Fibroblasts
contractile proteins in, 30a
herpes simplex–infected, 78a
Fibromatosis
congenital, simulation of, 91a
ultrastructure of, 84a
Fibrosis
cystic, fasciculus gracilis degeneration in, 5a
Foam cells
of regressing atherosclerotic lesions, 70a

Galactosamine
for hepatitis induction, 393
Gaucher's disease
and liver failure in newborn, 12a
Genetics
and prenatal diagnosis, 3a
Gentamicin
renal effects of, 56a, 589
Giantism
localized, 90a
Glomerular conditions (*see* kidney)
Glutathione
deficiency in erythrocytes, animal model of, 233
Glycogenosis
hepatic, with renal glomerular cysts, 17a
Glycoprotein
synthesis in adrenal medulla cells, 61a
Gonorrhea
animal model of, 437
Granulomas
induced disease in lung, 83a
and potentiation by lentinan, 67a
Granulomatous disease
chronic, disorders with, 16a

Hair follicles
in undernourished rats, 9
Healing of wounds
and collagen synthesis in diabetic mice, 58a

capillary morphogenesis in, diabetes affecting, 58a
Heart
abnormal connections of vessels, 414, 416
allograft rejection, neutrophils in, 66a
congenital mesoblastic myocardial tumors, 15a
cyanotic congenital disease, renal juxtaglomerular apparatus in, 8a
injury from overdose defibrillation shocks, 25a
left-to-right shunts, 408
localization of technetium 99m–labeled phosphates after coronary occlusion, 24a
myocardial disease in tick typhus, 22a
obstructions in, 424
operative congenital disease of, 408
perfusion alterations and other changes in acute infarction, 24a
planimetry of infarct mass at necropsy, 26a
right-to-left shunts, 421
sarcoplasmic reticulum of, 26a
scintigraphy in acute infarction, 24a, 25a
septal defects, 408
in sudden infant death syndrome, 1, 92a
thrombotic reactions to catheters, 81a
ultrastructure of cardiac muscle cell, 192
valvular obstruction, congenital, 428
in vitamin E deficiency, 27a
HeLa cells
iron affecting cell cycle of, 77a
trypsin affecting surface proteins of, 30a
Hemoglobinopathies
prenatal detection of, 3a
Heparin
and antiplatelet agents, in renal allograft rejection, 25
Hepatitis
galactosamine-induced, 393
induction with Australia antigen, 85
Hepatitis B virus
and polyarteritis nodosa, 28a
Heroin addicts
nephrotic, 57a
Herpes simplex
fibroblasts infected with, 78a
isolation of virus from trigeminal ganglia, 15a
Hexamethylphosphoramide
in respiratory mycoplasmosis, 171
Histiocytic lymphoma
immunoglobulins in, 461
Histiocytoma
fibrous, congenital, 91a
Histocompatibility complex
in genetically inbred rats, 63a
Hodgkin's disease
immunoglobulins in, 462
Hormone receptors
in breast cancer, 74a
in ovarian tissue, 74a
Hyaline membrane disease
and bronchopulmonary dysplasia, 241
hypostatic pneumonia with, 91a
Hydrazines
substitute, tumorigenicity of, 40a
Hyperalimentation
conjugated hyperbilirubinemia in, 13a
Hypertension
renal, adrenal cortex in, 143

Immune cytolysis
complement-mediated
in herpes simplex–infected fibroblasts, 78a
protein A affecting, 64a
Immune response
cellular factors in, 62a
Immunization
against malignant lymphoma, 87a
Immunocytochemical detection
of carcinoembryonic antigen, 74a
of immunoglobulin in lymphoreticular neoplasms, 457
Immunodeficiency disease
severe combined, 23a
Immunoglobulins
IgA
in nephropathy, 54a
and secretory component synthesis by colonic neoplasms, 327
in lymphoreticular neoplasms, 457
in thymocyte plasma membranes, 80a
Immunologic studies
in sarcoidosis, 76a
Treponemal antigen in syphilitic glomerulonephritis, 479
Indomethacin
and platelet contractile waves, 513
Infant death, sudden
and carotid body abnormalities, 29a
heart in, 1, 92a
Influenza
and macrophage accumulation, 78a
Insulin
and capillary morphogenesis in wound healing, 58a
resistance to, 74a
secretion of, 73a
Intestines
anti-intestinal antibody in inflammatory disease, 88a
colon tumor markers, 31a

ischemia affecting muscle cells in, 315
mucosa in celiac disease, 14a
secretory component synthesis by colonic neoplasms, 327
Intoxications
lead, cerebral vasculopathy in, 18a
mercury, cerebellar synaptosome protein synthesis in, 39a
Iron
and cell cycle of HeLa cells, 77a
Ischemia
intestinal, affecting muscle cells, 315
Islet cells (*see* pancreas)

K-virus
in pulmonary endothelium, 64a
Kidney
antikidney cytotoxic antibodies in allografts, 55a
congenital nephrotic syndrome, 9a
distribution of glomerular anionic sites, 54a
ectopic tissue in sacral region, 8a
endocrine, ultrastructural cytochemistry of, 527
gentamicin affecting, 56a, 589
glomerular cysts with hepatic glycogenosis, 17a
glomerular filtration surfaces after nephrectomy, 53a
glomerular lesions in lipid nephrosis, 20a
hyperacute allograft rejection and antiplatelet agents with heparin, 25
and effects of phenoxybenzamine and methylprednisolone, 43
IgA nephropathy, 54a
ischemia affecting membrane-associated particles in nuclei, 49a
juxtaglomerular apparatus in cyanotic congenital heart disease, 8a
lesions from vitamin D, calcium-binding protein affecting, 55a
in nephrotic heroin addicts, 57a
polycystic, steroid-induced, 373
serum chemistry in diseases of, 56a
syphilitic glomerulonephritis, 479
tubular effects of cadmium-metallothioneine, 38a
Wilms' tumor and multifocal metanephric hamartomata, 8a

Langerhans cells
lymph-borne, 85a
Lead intoxication
cerebral vasculopathy in, 18a
Lecithin:sphingomyelin ratio
in pulmonary effluent, in respiratory distress syndrome, 6a
Lentinan
and granulomatous inflammation, 67a
Leukemia
Scripps leukemia virus in mice, 299
Leukocytes
polymorphonuclear, in corneal vascularization, 51a, 157
Lipids
hyperlipemic serum affecting aortic medial cells, 70a
Liver
in α-1-antitrypsin deficiency, 265
Australia antigen in induction of hepatitis, 85
disorders in childhood, 11a
drug metabolism in cell cultures, 47a
endoplasmic reticulum of, 61
galactosamine-induced hepatitis, 393
glycogenosis of, with renal glomerular cysts, 17a
hepatitis B virus, and polyarteritis nodosa, 28a
hepatocellular carcinoma from nafenopin, 37a
neonatal failure in Gaucher's disease, 12a
parenchymal cells in Reye's syndrome, 12a
trichloroethylene affecting, 36a
Lungs
altered postnatal growth of, 10a
alveolar injury, experimental, 353
blastoma in infant, 90a
bronchopulmonary dysplasia after hyaline membrane disease, 241
cellular differentiation in, 10a
desquamative interstitial pneumonitis, 44a
drugs affecting fetal organ cultures of, 10a
elastica network of alveolus, 43a
elastin in elastase-induced emphysema, 42a
heavy-ion irradiation of, 287
hexamethylphosphoramide in respiratory mycoplasmosis, 171
hypersensitivity pneumonitis, 83a
hypostatic pneumonia with hyaline membrane disease, 91a
induced granulomatous disease in, 83a
inhibition of metastases by BCG, 75a
intraalveolar conchoidal bodies, 43a
K-virus in endothelium, 64a
lecithin : sphingomyelin ratio in effluent, in respiratory distress syndrome, 6a
mitosis in trypsin-induced injury, 41a

morphogenesis of alveolar septal elastin, 42a
perinatal development of, 10a
radiation injury to, 46a, 549
respiratory syncytial virus in ferrets, 339
ultrastructural changes in asthma, 45a
vascular development in, 9a
in vitamin E deficiency, 27a
Lupus erythematosus
viral studies in, 79a
Lymph
Langerhans cells in, 85a
Lymphocytes
in corneal vascularization, 51a, 157
mixed cultures of, synergistic responses in, 81a
reactivity with anti-human brain serum, 67a
responses to A23187 and PHA, 65a
Lymphomas, malignant
immunoglobulins in, 457
in intestines inoculated with spleen cells, 66a
single dose immunization in, 87a

Macrophages
accumulation after influenza, 78a
C3 receptors on membranes, 89
peritoneal, DAP-II activity in, 49a
Mallory bodies
identification of, 50a
Malnutrition
hair and skin lesions in, 9
Mast cell tumor
purified cells from, 35a
Meconium
diagnostic properties of, 3a
Melanin
in pineal gland, 14a
Melanoma
malignant, animal model of, 441
Membrane
formation in foam cells of regressing atherosclerotic lesions, 70a
macrophage, C3 receptors on, 89a
plasma membrane vesiculation, 48a
thymocyte, immunoglobulins in, 80a
Mercury intoxication
cerebellar synaptosome protein synthesis in, 39a
Metallothioneine
with cadmium, renal tubular effects of, 38a
Methacholine
bronchitis from, 45a
Methylprednisolone
and renal allograft rejection, 43
Microchemistry
clinical applications of, 3a
Microtubules
of brain, phenobarbital affecting, 19a
Mitral valve
stenosis of, congenital, 431
Muscle
dystrophy of extraocular muscle, 101, 111
infantile spinal atrophy, animal model of, 649
intestinal, ischemia affecting, 315
in mixed connective tissue disease, 28a
ultrastructure of cardiac muscle cell, 192
in vitamin E deficiency, 27a
Mycoplasmosis
respiratory, hexamethylphosphoramide in, 171
Myelomalacia
from tilorone in EAE, 381
Myelopathy
cervical, in achondroplasia, 4a
Myocardium (*see* heart)

Nafenopin
hepatocellular carcinoma from, 37a
Neoplasia
cell surface studies in, 30a
chemical carcinogenesis in tracheas, 32a
cholangiocarcinoma induction, 37a
colonic
markers in, 31a
and secretory component synthesis, 327
contractile proteins in cancer cells, 30a, 76a
desmosome frequencies in bladder transitional cell carcinoma, 31a
fibromatosis ultrastructure, 84a
fibrous histiocytoma, congenital, 91a
hepatocarcinoma
with glycogenosis and renal cysts, 17a
from nafenopin, 37a
lymphoreticular (*see* Lymphomas)
malignant small cell tumor of thoracopulmonary region, 2a
melanomas, experimental, 441
myocardial, in infancy, 16a
neutron-induced, 84a
oophorectomy preventing endometrial tumor induction, 33a
pathobiology of, 114
pulmonary blastoma in infant, 90a
purified cells from mast cell tumor, 35a
soft tissue, 1a
staging of pediatric tumors, 2a
tetracycline affecting induction of tumors, 34a
therapy of metastatic prostate adenocarcinomas, 33a

transplant of prostate adenocarcinoma cells to marrow of chimeric rats, 33a
transplantable ACTH-secreting pituitary tumors, 59a
trypsin action on HeLa cell surface proteins, 30a
tumorigenicity of substitute hydrazines, 40a
Wilms' tumor and multifocal hamartomata, 7a
yolk sac carcinoma, 17a
Nephritis (*see* kidney)
Neuroblastoma
histologic grading of, 2a
Neutron exposure
neoplasms from, 84a
Neutrophils
and hyperacute rejection of cardiac allografts, 66a
inclusions in colchicine intoxication, 88a
***N*-Nitroso-*N*-methylurethane**
alveolar injury from, 353
Nutrition
dietary induction of atherosclerosis, 68a
hair and skin lesions in malnutrition, 9
parenteral, conjugated hyperbilirubinemia in, 13a

Occipital bone malformation
in chondrodystrophy, 4a
Oophorectomy
and prevention of endometrial tumor induction, 33a
Organ cultures
of bronchial mucosa, uranyl acetate affecting, 46a
of embryonic pancreas, 119
of fetal lungs, drugs affecting, 10a
Ovaries
hormone receptors in, 74a

Pancreas
acinar cells in Reye's syndrome, 12a
detection of small islet cell clusters, 61a
embryonic, organ culture of, 119
islitis from streptozotocin, 60a
Parathormone
conversion from proparathormone, 59a
Pediatrics
hepatic and metabolic disorders, 11a
and prenatal diagnostic methods, 3a
pulmonary development, perinatal, 9a
renal pathology, 7a
soft tissue tumors, 1a
staging of tumors, 2a
Phenobarbital
affecting brain microtubules, 19a
Phenoxybenzamine
and renal allograft rejection, 43
Phytohemagglutinin
lymphocyte responses to, compared to A23187, 65a
Pineal gland
melanin in, 14a
Pituitary gland
ACTH-secreting tumors of, transplantable, 59a
Placenta
in sickle cell disease, 5a
Planimetry
of myocardial infarct mass at necropsy, 26a
Platelets
agents affecting contraction of, 513
antiplatelet agents in renal allograft rejection, 25
interaction with collagen, 129
Pneumonia
hypostatic, with hyaline membrane disease, 91a
Pneumonitis
desquamative interstitial, 44a
hypersensitivity, 83a
Poly ($Glu^{52}Lys^{33}Tyr^{15}$)
in vitro proliferative response to, 63a
Polyarteritis nodosa
and hepatitis B virus, 28a
Polychlorinated biphenyls
maternal ingestion of, affecting infant, 21a
metabolic study of, 36a
Polycythemia
renal juxtaglomerular apparatus in, 8a
Pregnancy
toxemia of, experimental, 80a
Prenatal diagnostic methods, 3a
Prostaglandins
and platelet contraction, 513
Prostate adenocarcinoma
metastatic, therapy of, 33a
transplant of cells to bone marrow chimeric rats, 33a
Protein
calcium-binding, and renal lesions from vitamin D, 55a
and calorie deficiency, hair and skin lesions in, 9
contractile, in cancer cells, 30a, 76a
on HeLa cell surface, trypsin affecting, 30a
staphylococcal protein A interaction with influenza-infected cell monolayers, 64a
Pulmonary valve
obstruction of, 421, 429
Pulmonary vessels
abnormal connections of, 415
arteriovenous fistula in, 424
transposition with aorta, 423

Pyridinolcarbamate
and renal allograft rejection, 25

Radiation
cranial, cerebral vasculopathy from, 20a
heavy-ion, of lung, 287
lung injury from, 46a, 549
Respiratory distress syndrome
and lecithin:sphingomyelin ratio in pulmonary effluent, 6a
Reye's syndrome
hepatic and pancreatic cells in, 12a
Rhabdomyosarcoma
ultrastructure of, 1a

Sacral region
ectopic renal tissue in, 8a
Saphenous vein grafts
and atherosclerosis, 71a
Sarcocystis muris
transmission by cats, 52a
Sarcoidosis
immunologic studies in, 76a
simulation by hypersensitivity pneumonitis, 83a
Sarcoma
undertermined histogenesis of, 1a
Sarcoplasmic reticulum
cardiac, 26a
Scintigraphy
in acute myocardial infarction, 24a, 25a
Scripps leukemia virus
in mice, 299
Septal defects
cardiac, 408
Shocks
defibrillation, effects of overdose in, 25a
Sickle cell disease
placental studies in, 5a
Skin
regeneration of, unbalanced macromolecular accumulation in, 47a
tight-skin mice, 493
in undernourished rats, 9
Sphingomyelin:lecithin ratio
in pulmonary effluent, in respiratory distress syndrome, 6a
Spinal muscular atrophy
infantile, animal model of, 649
Spleen cells
intestines inoculated with, and lymphoma development, 66a
Staining methods
for small islet cell clusters, 61a
Staphylococcal protein A
interaction with influenza-infected cell monolayers, 64a
Steroid hormones
molecular mechanisms in action of, 74a
and polycystic kidney induction, 373
Stomach
healing of mucosal ulcers in, 39a
Streptozotocin
pancreatic islitis from, 60a
Sudden infant death syndrome
abnormalities in, 1, 29a, 92a
Sudoxicam
and renal allograft rejection, 25
Synaptosomes
cerebellar, in mercury intoxication, 39a
Syncytial virus
respiratory, in ferrets, 339
Syphilis
and glomerulonephritis, 479

Tetracycline
and tumor induction, 34a
Tetralogy of Fallot, 421
α-Thalassemia
homozygous, congenital anomalies in, 6a
Thoracopulmonary region
malignant small cell tumor of, 2a
Thrombosis
catheter-induced, 81a
Thrombus formation
on artificial surface, agents affecting, 445
Thymocytes
immunoglobulins in plasma membranes of, 80a
Thymus
dysplasia with chronic granulomatous disease, 16a
Tick typhus
myocardial disease in, 22a
Tilorone
in experimental allergic encephalomyelitis, 381
Tissue cultures
of macular corneal dystrophy, 61a
Toxemia of pregnancy
experimental, 80a
Trachea
chemical carcinogenesis in, 32a
Transplants
kidney
and action of antiplatelet agents, 25
and action of phenoxybenzamine and methylprednisolone, 43
and antikidney cytotoxic antibodies, 55a
neutrophils in hyperacute rejection of cardiac allografts, 66a
procurement of cadaver allografts, 86a
Treponemal antigen
in syphilitic glomerulonephritis, 479
Trichloroethylene
hepatotoxicity of, 36a

Trigeminal ganglia
herpes simplex virus isolation from, 15a
Trypsin
action on HeLa cell surface proteins, 30a
α-1-antitrypsin deficiency, liver in, 265
lung injury from, mitosis in, 41a
Tuberculosis
miliary, with chronic granulomatous disease, 16a
Typhus
tick, myocardial disease in, 22a

Ulcers
duodenal, chemical induction of, 40a
of gastric mucosa, healing of, 39a
stress, healing of, 39a
Uranyl acetate
affecting bronchial mucosa in organ culture, 46a
Uterus
oophorectomy in prevention of endometrial tumor induction, 33a
Uveitis
and Australia antigen, 85

Valves, cardiac
congenital obstruction of, 428
Vas deferens
cytochemistry after vasectomy, 50a
Vasculature
abnormal connections of vessels, 414, 416
atherosclerosis (*see* atherosclerosis)
cerebral
after cranial radiation, 20a
in lead intoxication, 18a
morphology after multiple arterial punctures, 82a
patent ductus arteriosus, 514
pulmonary, development of, 9a
transposition of great vessels, 423
Vascularization
corneal, leukocytes in, 51a, 157
Vasectomy
epididymis cytochemistry after, 50a
Vesiculation
plasma membrane, 48a
Viruses
hepatitis B virus, and polyarteritis nodosa, 28a
and immune cytolysis
in herpes simplex–infected fibroblasts, 78a
protein A affecting, 64a
K-virus in pulmonary endothelium, 64a
in lupus erythematosus, 79a
respiratory syncytial virus in ferrets, 339
Scripps leukemia virus in mice, 299
Vitamin D
renal lesions from, calcium-binding protein affecting, 55a
Vitamin E
deficiency of, 27a

Warfarin
and thrombus formation on artificial surface, 445
Waterhouse-Friederichsen syndrome
animal model of, 653
Werdnig-Hoffman disease
animal model of, 649
Wilms' tumor
and multifocal metanephric hamartomata, 7a
Wound healing
capillary morphogenesis in, diabetes affecting, 58a
and collagen synthesis in diabetic mice, 58a

Yolk sac carcinoma, 17a

Index of Authors

Volume 82, 1976

Abitol MM: *See* Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallo GR, Cohen MW, ... 80a
Adamson IYR: *See* Bowden DH, Adamson IYR, ... 10a
Adelstein E: *See* Oxenhandler R, Hart M, Corman L, Sharp G, Adelstein E, ... 28a
Agostini RM Jr: *See* Yunis EJ, Agostini RM Jr, Glew RH, ... 265
Aita S: *See* Suzuki Y, Aita S, Hoshino T, Iwata H, ... 89a
Al-Doroubi QI: *See* Blair JD, Al-Doroubi QI, ... 90a
Allen JR: *See* Barsotti DA, Carstens LA, Allen JR, ... 21a
Allen JR: *See* Norback DH, Seymour JL, Allen JR, ... 36a
Alroy J, Weinstein RS, Pauli BU: Relation of desmosomes to tumor invasiveness in human urinary bladder transitional cell carcinomas (February), ... 31a
Alter BA: Prenatal detection of hemoglobinopathies (February), ... 3a
Anderson VM, Faust J: Chronic granulomatous disease with thymic dysplasia, miliary tuberculosis, and systemic candidiasis (February), ... 16a
Araujo-Nascimento M, Desormeaux Y, Cantin M: Ultrastructural cytochemistry of the ischemic (endocrine) kidney (March), ... 527
Argyris T: Unbalanced macromolecular accumulation during epidermal regeneration (February), ... 47a
Armstrong JA: *See* Kelly RH, Balfour BM, Armstrong JA, ... 85a
Arquilla ER: *See* Nakajo MM, Fidanian H, Weringer EJ, Arquilla ER, ... 58a
Arquilla ER: *See* Weringer EJ, Arquilla ER, ... 58a
Askin FB: *See* Dehner LP, Askin FB, Rosai J, ... 2a
Austin RM, Daniels CA: Protein A-mediated localization of *Staphylococcus aureus* on influenza-infected cell monolayers and inhibition by protein A of complement-mediated antiviral immune cytolysis (February), ... 64a
Azar HA, Halkias DG, Heckerman D: Effect of tetracycline on the induction of tumors in BALB/c mice (February), ... 34a

Baker HJ: *See* Overcash RG, Lindsey JR, Cassell GH, Baker HJ, ... 171
Baker RD, Tewari RP, Haught JE: Catheter-induced aseptic thrombotic endocarditis and sleeve thrombi (February), ... 81a
Baker T; *See* Drake RM, Franciosi RA, Spencer B, Baker T, ... 8a
Balfour BM: *See* Kelly RH, Balfour BM, Armstrong JA, ... 85a
Barnes GW, Cruse JM, Hickenbottom JP, Serio CS: Synergistic *in vitro* responses among thymus-dependent subpopulations in mixed lymphocyte cultures (February), ... 81a
Baron DA, Esterly JR: Mitotic figures in trypsin-induced lung injury (February), ... 41a
Barrett CR Jr: *See* Ryan SF, Bell ALL Jr, Barrett CR Jr, ... 353
Barsotti DA, Carstens LA, Allen JR: The association of transplacental and mammary movement of polychlorinated biphenyls with infant morbidity and mortality (February), ... 21a
Baskerville A: Animal Model of Human Disease: Chronic bronchitis (January), ... 237
Baskin S: *See* Tourville DR, Byrd LH, Kim DU, Zajd D, Lee I, Reichman LB, Baskin S, ... 479
Baturay NZ: *See* Ende N, Orsi EV, Britten TL, Baturay NZ, ... 55a
Beckham RW, Conger RFZ, Glassman AB: Morphology of vascular damage after multiple arterial punctures (February), ... 82a
Bell ALL Jr: *See* Ryan SF, Bell ALL Jr, Barrett CR Jr, ... 353
Benchimol S: *See* Cantin M, Benchimol S, ... 61a
Benjamin SA: *See* Slauson DO, Hahn FF, Benjamin SA, Chiffelle TL, Jones RK, ... 549
Bennett W: *See* Houghton DC, Hartnett M, Campbell-Boswell M, Porter G, Bennett W, ... 589
Bensch K: *See* Bonikos D, Bensch K, Stettler L, Groth D, ... 46a

Bernstein J, Chang C-H, Brough AJ: Conjugated hyperbilirubinemia in infancy associated with hyperalimentation (February), ... 13a
Bernstein J: *See* Maskai N, Goodman PA, Bernstein J, ... 54a
Bernstein J: *See* Yang SS, Heidelberger KP, Brough AJ, Corbett DP, Bernstein J, ... 4a
Bertoli F: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Birdwell DA, Price RA: Cerebral vasculopathy following cranial irradiation in children with acute leukemia (February), ... 20a
Birtch AG: *See* Colman RW, Habal M, Hollenberg NK, Birtch AG, Busch GJ, ... 25
Bjorck G: *See* Sandefeldt E, Cummings JF, de Lahunta A, Bjorck G, Krook LP, ... 649
Blair JD, Al-Doroubi QI: Pulmonary blastoma in an infant (February), ... 90a
Blair JD, Thompson JS, Hernandez B: Congenital mesoblastic myocardial tumors of infancy (February), ... 15a
Bleyl U: *See* Müller-Berghaus G, Reuter C, Bleyl U, ... 393
Blumenfeld I: *See* Meier W, Blumenfeld I, James IS, Driscoll J Jr, ... 6a
Blumenfeld TA, Hardwick DF: Clinical applications of microchemistry (February), ... 3a
Blumenfeld TA, Hardwick DF: Laboratory investigation of biochemical disorders (February), ... 3a
Boitnott JK: *See* Hutchins GM, Miner MM, Boitnott JK, ... 27a
Bojanic N: *See* Mahnovski V, Landing BH, Bojanic N, Tasic G, Filipovic D, ... 13a
Bond MG, Bullock BC, Clarkson TB: Diet-induced coronary atherosclerosis of pig-tailed macaques (February), ... 68a
Bond MG, Bullock BC, Clarkson TB, Lehner NDM: The effect of plasma cholesterol concentrations on "regression" of primate atherosclerosis (February), ... 69a
Bond MG: *See* Bullock BC, Wagner WD, Bond MG, Clarkson TB, ... 82a
Bonikos D, Bensch K, Stettler L, Groth D: The effect of uranyl acetate on bronchial mucosa in organ culture (February), ... 46a
Bonte FJ: *See* Buja LM, Dees JH, Parkey RW, Stokely EM, Bonte FJ, Willerson JT, ... 24a
Boor PJ, Reynolds ES, Fishbein MC: A rapid planimetric method for quanititating left ventricular and necrotic myocardial mass (February), ... 26a
Bouldin TW: *See* Krigman MR, Bouldin TW, Mushak P, ... 18a
Bove KE, McAdams AJ: Multifocal metanephric hamartomata and Wilms' tumor (February), ... 7a
Bowden DH, Adamson IYR: Cellular differentiation in the developing lung (February), ... 10a
Bradford WD, Pickett JP, Hackel DB: The pathology of myocardial disease in tick typhus (February), ... 22a
Bradford WD, Shelburne JD, Hawkins HK: Ultrasturctural studies on hepatic parenchymal and pancreatic acinar cells in Reye's syndrome (February), ... 12a
Bradford WD: *See* Jauregui HO, Dyer C, Hawkins H, Bradford WD, Kinney TD, ... 77a
Brandt EJ, Swank RT: The Chediak-Higashi (beige) mutation in two mouse strains (March), ... 573
Breinin GM: *See* Davidowitz J, Pachter BR, Philips G, Breinin GM, ... 101
Breinin GM: *See* Pachter BR, Davidowitz J, Breinin GM, ... 111
Britten TL: *See* Ende N, Orsi EV, Britten TL, Baturay NZ, ... 55a
Brough AJ: *See* Bernstein J, Chang C-H, Brough AJ, ... 13a
Brough AJ: *See* Yang SS, Heidelberger KP, Brough AJ, Corbett DP, Bernstein J, ... 4a
Brown WJ, Ventilla M, Schain R: Phenobarbital effects on brain microtubular assembly (February), ... 19a
Brown WJ: *See* Verity MA, Brown WJ, Cheung M, Huntsman H, ... 39a
Bruneau ME; *See* Crocker JFS, Stewart AG, Sparling JM, Bruneau ME, ... 373
Bucci TJ: *See* Empson RN, Bucci Tj, Morrissey RL, Chandler JS, ... 55a
Buchanan PD: *See* Malouf N, Kirkman HN, Buchanan PD, ... 13a
Buck BE, States B, Hummeler K, Segal S; Cystinosis *in utero:* Distribution and postulated morphogenesis of the crystals (February), ... 21a
Buja LM, Dees JH, Parkey RW, Stokely EM, Bonte FJ, Willerson JT: Interrelationships of morphologic changes, scintigraphic findings and regional perfusion alterations in acute myocardial infarction (February), ... 24a

Bulkley BH, Hutchins GM: Accelerated "atherosclerosis": A morphologic study of 91 saphenous vein coronary artery bypass grafts (February), ... 71a
Bullock BC, Wagner WD, Bond MG, Clarkson TB: The effect of intermittent hypercholesterolemia on aortic atherosclerosis of rhesus monkeys (February),.. 82a
Bullock BC: *See* Bond MG, Bullock BC, Clarkson TB, ... 68a
Bullock BC: *See* Bond MG, Bullock BC, Clarkson TB, Lehner NDM,..... 69a
Bunker LE: *See* Green MC, Sweet HO, Bunker LE,..... 493
Busch GJ: *See* Colman RW, Habal M, Hollenberg NK, Birtch AG, Busch GJ,..... 25
Buschmann RJ: *See* Reddy KP, Buschmann RJ, Chomet B,..... 37a
Byram JE III: *See* Von Lichtenberg F, Sher FA, Byram JE III, Joel M,..... 67a
Byrd LH: *See* Tourville DR, Byrd LH, Kim DU, Zajd D, Lee I, Reichman LB, Baskin S,..... 479

Campbell-Boswell M: *See* Houghton DC, Campbell-Boswell M, Porter G, Bennett W,..... 589
Cantin M, Benchimol S: Radioautographic studies with L-fucose ^{3}H of glycoprotein synthesis in cells of adrenal medulla (February), ... 61a
Cantin M: *See* Araujo-Nascimento M, Desormeaux Y, Cantin M,..... 527
Carlin D: *See* Geller A, Gilles F, Shwachman H, Carlin D,..... 5a
Carstens LA: *See* Barsotti DA, Carstens LA, Allen JR,..... 21a
Casey AE, Hall LM, Downey EL, Copeland H, Mueller TJ: Characteristic serum chemistry templates for nephrosis, nephritis and retrograde nephropathy (February), ... 56a
Cassell GH: *See* Overcash RG, Lindsey JR, Cassell GH, Baker HJ,..... 171
Cerreta JM, James LS, Stark RI, Mandi I, Fierer JA: Morphogenesis of alveolar septal elastin (February), ... 42a
Cerreta JM: *See* Fierer JA, Cerreta JM, Turino GM, Mandi I,..... 42a
Chandler FW Jr, Kraus SJ: Animal Model of Human Disease: Gonorrhea (February), ... 437
Chandler JS: *See* Empson RN, Bucci TJ, Morrissey RL, Chandler JS,..... 55a
Chang CF, Pollard M: Transplantation of prostate adenocarcinoma cells to bone marrow chimeric rats (February),..... 33a
Chang C-H: *See* Bernstein J, Chang C-H, Brough AJ,..... 13a
Chang LW: Ultrastructural changes in the renal tubules following methyl cadmium intoxication (February), ... 38a
Cherian MG: *See* Goyer RA, Cherian MG, ... 38a
Cheung M: *See* Verity MA, Brown WJ, Cheung M, Huntsman H,..... 39a
Chiffelle TL: *See* Slauson DO, Hahn FF, Benjamin SA, Chiffelle TL, Jones RK,..... 549
Chomet B: *See* Reddy KP, Buschmann RJ, Chomet B, ... 37a
Chu LLH: *See* McGregor DH, Cohn DV, Chu LLH, ... 59a
Churg J: *See* Grishman E, Churg J, Porush JG,..... 57a
Clarkson TB: *See* Bond MG, Bullock BC, Clarkson TB, ... 68a
Clarkson TB: *See* Bond MG, Bullock BC, Clarkson TB, Lehner NDM, ... 69a
Clarkson TB: *See* Bullock BC, Wagner WD, Bond MG, Clarkson TB,..... 82a
Cohen MW: *See* Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallor GR, Cohen MW, ... 80a
Cohen SH: *See* Garancis JC, Cohen SH, Fink JN, ... 83a
Cohn DV: *See* McGregor DH, Cohn DV, Chu LLH,..... 59a
Coleman SE: *See* Hackett RL, Coleman SE, Duggan J,..... 49a
Colman RW, Habal M, Hollenberg NK, Birtch AG, Busch GJ: Hyperacute renal allograft rejection in the primate: Therapeutic limitations of antiplatelet agents alond and combined with heparin (January), ... 25
Conger RFZ: *See* Beckham RW, Conger RFZ, Glassman AB,..... 82a
Coogan PS, Miller A III, Pellettiere EV, Hass GM: Prevention of 2-acetylaminofluorene induction of rabbit endometrial tumors by oophorectomy (February), ... 33a
Copeland H: *See* Casey AE, Hall LM, Downey EL, Copeland H, Mueller TJ,..... 56a
Corbett DP: *See* Yang SS, Heidelberger KP, Brough AJ, Corbett DP, Bernstein J,... 4a
Corley GJ: *See* Sobel HJ, Marquet E, Kallman KD, Corley GJ,..... 441

Corman L: *See* Oxenhandler R, Hart M, Corman L, Sharp G, Adelstein E, ... 28a
Cotran RS: *See* Seiler MW, Rennke HG, Cotran RS, Venkatachalam MA, ... 54a
Cramer DV: *See* Gill TJ III, Kunz HW, Cramer DV, Shonnard J, ... 63a
Cramer DV: *See* Shonnard J, Cramer DV, Davis BK, Gill TJ III, ... 63a
Crocker JFS, Stewart AG, Sparling JM, Bruneau ME; Steroid-induced polycystic kidneys in the newborn rat: The electrolyte and chemical requirements (February), ... 373
Croker BP: *See* Del Villano BC, Croker BP, McConahey PJ, Dixon FJ, ... 299
Cruse JM: *See* Barnes GW, Cruse JM, Hickenbottom JP, Serio CS, ... 81a
Cruse JM: *See* Serio CS, Cruse JM, ... 89a
Crussi FG, Lee SC: Observations on a case of localized gigantism (February), ... 90a
Crussi FG, Roth LM, Henry MM: Yolk sac carcinoma: The experience at Indiana University (February), ... 17a
Csank-Brassert J: *See* Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ, ... 76a
Cummings JF: *See* Sandefeldt E, Cummings JF, de Lahunta A, Bjorck G, Krook LP, ... 649
Cuppage FE, Setter KR, Sullivan LP: Effects of chronic administration of gentamicin on the rat kidney (February), ... 56a
Cutz E, Levison H, Orange RP: Ultrastructural changes in bronchial asthma (February), ... 45a
Cutz E, Sondheimer J, Forstner GG, Weber JL: Histochemistry and ultrastructure of liver in cholesterol ester storage disease (February), ... 11a

Dahlman H: *See* Goldenberg DM, Pant KD, Munjal D, Dahlman H, ... 31a
Dail D, Liebow AA: Intraalveolar conchoidal bodies (February), ... 43a
Daniele RP, Rowlands DT Jr: Immunologic studies in sarcoidosis (February), ... 76a
Daniels CA, Kleinerman ES, Snyderman R: Depressed macrophage accumulation following influenza infection in mice (February), ... 78a
Daniels CA: *See* Austin RM, Daniels CA, ... 64a
Daniels CA: *See* Trofatter KF, Daniels CA, ... 78a
Davidowitz J, Pachter BR, Philips G, Breinin GM: Structural alterations of the junctional region in extraocular muscle of dystrophic mice. II. Modifications of sole-plate nuclei (January), ... 101
Davidowitz J: *See* Pachter BR, Davidowitz J, Breinin Gm, ... 111
Davis BK, Shonnard JW, Gill TJ III: Genetic control of the immune response: Cellular factors (February), ... 62a
Davis BK: *See* Shonnard J, Cramer DV, Davis BK, Gill TJ III, ... 63a
Davis CR, Rochester DF, Lavietes MH, Hagstrom JWC: Histochemical and electron microscopic studies on induced granulomatous disease in the dog lung (February), ... 83a
Davis JS: *See* Lie JT, Davis JS, Tacker WA, Geddes LA, ... 25a
Davis JS: *See* Min K-W, Gyorkey F, Davis JS, Jones M, Gyorkey P, ... 28a
Dees JH: *See* Buja LM, Dees JH, Parkey RW, Stokely EM, Bonte FJ, Willerson JT, ... 24a
Dehner LP, Askin FB, Rosai J: Malignant small cell tumor of the thoracopulmonary region in children and adolescents (February), ... 2a
De Lahunta A: *See* Sandefeldt E, Cummings JF, de Lahunta A, Bjorck G, Krook LP, ... 649
De la Iglesia FA, Sturgess JM, McGuire EJ, Feuer G: Quantitative microscopic evaluation of the endoplasmic reticulum in developing human liver (January), ... 61
Del Villano BC, Croker BP, McConahey PJ, Dixon FJ: Immunopathology and oncogenicity of murine leukemia viruses. II. Infection of mice and rats with Scripps leukemia virus (February), ... 299
Deo MG: *See* Mathur M, Deo MG, ... 9
Desormeaux Y: *See* Araujo-Nascimento M, Desormeaux Y, Cantin M, ... 527
Dixon FJ: *See* Del Villano BC, Croker BP, McConahey PJ, Dixon FJ, ... 299
Dooling E, Gilles F: Melanin in the immature human pineal gland (February), ... 14a
Downey EL: *See* Casey AE, Hall LM, Downey EL, Copeland H, Mueller TJ, ... 56a
Drake RM, Franciosi RA, Spencer B, Baker T: Ectopic renal tissue in region of sacrum: A case report (February), ... 8a

Driscoll J Jr: *See* Meier W, Blumenfeld I, James IS, Driscoll J Jr, ... 6a
Driscoll SG: *See* Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallo GR, Cohen MW, ... 80a
Drummond EJ: *See* Lane BP, Jasper GE, Mass MJ, Drummond EJ. 32a
Duggan J: *See* Hackett RL, Coleman SE, Duggan J, ... 49a
Dyer C: *See* Jauregui HO, Dyer C, Hawkins H, Bradford WD, Kinney TD, ... 77a

Edwards JE: Review article: Survey of operative congenital heart disease (February), ... 407
Empson RN, Bucci TJ, Morrissey RL, Chandler JS: Restriction of renal lesions induced by vitamin D_3 to tubules containing calcium-binding protein (February), ... 55a
Ende N, Orsi EV, Britten TL, Baturay NZ: Antikidney cytotoxic antibodies in human renal allografts (February), ... 55a
Esterly JR, Mahan GB: Altered postnatal lung growth (February), ... 10a
Esterly JR: *See* Baron DA, Esterly JR, ... 41a

Faust J: *See* Anderson VM, Faust J, ... 16a
Favara BE: *See* Levine G, Mierau G, Favara BE, ... 16a
Favara BE: *See* Mierau G, Favara BE, ... 1a
Favara BE: *See* Robinson CC, Varnell JL, Mierau GW, Favara BE, ... 15a
Feuer G: *See* De la Iglesia FA, Sturgess JM, McGuire EJ, Feuer G, ... 61
Fidanian H: *See* Nakajo MM, Fidanian H, Weringer EJ, Arquilla ER, ... 58a
Fierer JA, Cerreta JM, Turino GM, Mandi I: Ultrastructural studies of lung elastin-induced emphysema (February), ... 42a
Fierer JA: *See* Cerreta JM, James LS, Stark RI, Mandi I, Fierer JA, ... 42a
Filipovic D: *See* Mahnovski V, Landing BH, Bojanic N, Tasic G, Filipovic D, ... 13a
Fink JN: *See* Garancis JC, Cohen SH, Fink JN, ... 83a
Fischer-Dzoga K: *See* Jones RM, Fischer-Dzoga K, Wissler RW, ... 70a
Fishbein MC: *See* Boor PJ, Reynolds ES, Fishbein MC, ... 26a
Fisher R: *See* Naeye RL, Fisher R, ... 29a
Fisher R: *See* Naeye RL, Fisher R, ... 92a
Fisher R: *See* Naeye RL, Whalen P, Ryser M, Fisher R, ... 1
Forbes RDC, Guttman RD, Kuramochi T, Klassen J, Knaack J: Nonessential role of neutrophils in hyperactive rejection of rat cardiac allografts (February), ... 66a
Forstner GG: *See* Cutz E, Sondheimer J, Forstner GG, Weber JL, ... 11a
Franciosi RA: *See* Drake RM, Franciosi RA, Spencer B, Baker T, ... 8a
French SW: *See* Sim JS, French SW, ... 50a
Frenkel JK, Ruiz A: *Sarcocystis muris* of mice: Recognition of cyclic transmission by cats (February), ... 52a
Friend DS: *See* Galle J, Friend DS, ... 50a
Fromer CH, Klintworth GK: An assessment of the corneal vasoproliferative capability of polymorphonuclear leukocytes and lymphocytes (February), ... 51a
Fromer CH, Klintworth GK: An evaluation of the role of leukocytes in the pathogenesis of experimentally induced corneal vascularization. III. Studies related to the vasoproliferative capability of polymorphonuclear leukocytes and lymphocytes (January), ... 157
Fujikura T, Klionsky B: Hypostatic pneumonia with hyaline membrane disease (February), ... 91a
Furcht LT: *See* Schollmeyer JE, Furcht LT, Wendelschafer-Crabb G, ... 30a
Furth J, Ito A, Kaul DK: Recent observations on two types of transplantable ACTH-secreting pituitary tumors in mice and rats (February), ... 59a

Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ: Contractile proteins in human cancer cells (February), ... 76a
Galle J, Friend DS: Fine structure and cytochemistry of the guinea pig epididymis and vas deferens after vasectomy (February), ... 50a
Gallo GR: *See* Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallo GR, Cohen MW, ... 80a
Garancis JC, Cohen SH, Fink JN: Hypersensitivity pneumonitis manifesting as pulmonary sarcoidosis (February), ... 83a

Garvin AJ, Spicer SS, McKeever PE: The cytochemical demonstration of intracellular immunoglobulin. II. In neoplasms of lymphoreticular tissue (March),.. 457
Geddes LA: *See* Lie JT, Davis JS, Tacker WA, Geddes LA, ... 25a
Geller A, Gilles F, Shwachman H, Carlin D: Fasciculus gracilis degeneration in cystic fibrosis (February), ... 5a
Gerrard JM, White JG: The influence of aspirin and indomethacin on the platelet contractile wave (March), ... 513
Gill TJ III, Kunz HW, Cramer DV, Shonnard J: Studies on the major histocompatibility complex of genetically inbred rats (February), ... 63a
Gill TJ III: *See* Davis BK, Shonnard JW, Gill TJ III, ... 62a
Gill TJ III: *See* Ladoulis CT, Misra DN, Gill TJ III, ... 80a
Gill TJ III: *See* Shonnard J, Cramer DV, Davis BK, Gill TJ III, ... 63a
Gilles F: *See* Dooling E, Gilles F, ... 14a
Gilles F: *See* Geller A, Gilles F, Shwachman H, Carlin D, ... 5a
Gillette PC: *See* Singer DB, Rosenberg HS, Gillette PC, ... 22a
Glass GBJ: *See* Lev R, Kawashima K, Glass GBJ, ... 39a
Glassman AB: *See* Beckman RW, Conger RFZ, Glassman AB, ... 82a
Glew RH: *See* Yunis EJ, Agostini RM Jr, Glew RH, ... 265
Goldenberg DM, Pant KD, Munjal D, Dahlman H: A study of organ and tumor markers associated with a xenografted human colonic carcinoma (February), ... 31a
Goldenberg DM, Sharkey RM, Primus FJ: Immunocytochemical detection of carcinoembryonic antigen in conventional histopathology sections (February), ... 74a
Goldfischer S: *See* Morecki R, Goldfischer S, ... 12a
Goodman PA: *See* Maskai N, Goodman PA, Bernstein J, ... 54a
Gordon GB: Modification of long chain saturated free fatty acid toxicity by unsaturated and short chain fatty acids (February), ... 69a
Gould VE, Weinstein RS: Ultrastructure of fibromatosis: Myofibroblastic differentiation and intracytoplasmic collagen fibers (February), ... 84a
Goyer RA, Cherian MG: Renal tubular effects of cadmium-metallothioneine (February), ... 38a
Graham R: *See* Jauregui HO, Graham R, Kinney TD, Menzel DB, ... 30a
Green MC, Sweet HO, Bunker LE: Tight-skin, a new mutation of the mouse causing excessive growth of connective tissue and skeleton (March), ... 493
Grishman E, Churg J, Porush JG: Glomerular morphology in nephrotic heroin addicts (February), ... 57a
Grodsky G: Mechanisms and control of insulin secretion (February), ... 73a
Groth D: *See* Bonikos D, Bensch K, Stettler L, Groth D, ... 46a
Guttmann RD: *See* Forbes RDC, Guttmann RD, Kuramochi T, Klassen J, Knaack J, ... 66a
Gyorkey F: *See* Min K-W, Gyorkey F, Davis JS, Jones M, Gyorkey P, ... 28a
Gyorkey P: *See* Min K-W, Gyorkey F, Davis JS, Jones M, Gyorkey P, ... 28a

Habal M: *See* Colman RW, Habal M, Hollenberg NK, Birtch AG, Busch GJ, ... 25
Hackel DB: *See* Bradford WD, Pickett JP, Hackel DB, ... 22a
Hackett RL, Coleman SE, Duggan J: Effect of renal ischemia on the size and distribution of membrane-associated particles in freeze-fractured nuclei (February), ... 49a
Hagstrom JWC: *See* Davis CR, Rochester DF, Lavietes MH, Hagstrom JWC, ... 83a
Hahn FF: *See* Slauson DO, Hahn FF, Benjamin SA, Chiffelle TL, Jones RK, ... 549
Haith LR Jr: *See* Szabo S, Haith LR Jr, Reynolds ES, ... 40a
Halkias DG: *See* Azar HA, Halkias DG, Heckerman D, ... 34a
Hall LM: *See* Casey AE, Hall LM, Downey EL, Copeland H, Mueller TJ, ... 56a
Hard RC Jr: Malignant lymphomas arising in the intestines of C3H mice perinatally inoculated with semiallogenic and isogenic spleen cells (February), ... 66a
Hardwick DF: *See* Bluemenfeld TA, Hardwick DF, ... 3a
Hart M: *See* Oxenhandler R, Hart M, Corman L, Sharp G, Adelstein E, ... 28a
Hartnett M: *See* Houghton DC, Hartnett M, Campbell-Boswell M, Porter G, Bennett W, ... 589
Hass G, Scott RA, Kedys M, Newton J: Arteriosclerosis due to multiple "risk factors": Enhanced by cirrhosis, prevented by adrenalectomy (February), ... 71a

Hass GM: *See* Coogan PS, Miller A III, Pellettiere EV, Hass GM, ... 33a
Hass GM: *See* McCreary P, Laing G, Hass Gm, ... 87a
Haught JE: *See* Baker RD, Tewari RP, Haught JE, ... 81a
Hawkins H: *See* Bradford WD, Shelburne JD, Hawkins H, ... 12a
Hawkins H: *See* Jauregui HO, Dyer C, Hawkins H, Bradford WD, Kinney TD, ... 77a
Haynes BF: *See* Singer DB, Rosenberg HS, Haynes BF, South MA, ... 23a
Heckerman D: *See* Azar HA, Halkais DG, Heckerman D, ... 34a
Heidelberger KP: *See* Yang SS, Heidelberger KP, Brough AJ, Corbett DP, Bernstein J, ... 4a
Henkin RE: *See* Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, ... 23a
Henry MM: *See* Crussi FG, Roth LM, Henry MM, ... 17a
Hensley G: *See* Valdivia E, Hensley G, Wu J, Leroy EP, Jaeschke W, ... 44a
Hensley GT: *See* Malinin TI, Hensley GT, ... 86a
Hernandez B; *See* Blair JD, Thompson JS, Hernandez B, ... 15a
Hickenbottom JP: *See* Barnes GW, Cruse JM, Hickenbottom JP, Serio CS, ... 81a
Hirsch BR: *See* Poger ME, Hirsch BR, Lamm ME, ... 327
Holborow EJ: *See* Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ, ... 76a
Holck S, Montour JL: Neutron-induced neoplasms in rats (February), ... 84a
Hollenberg NK: *See* Colman RW, Habal M, Hollenberg NK, Birtch AG, Busch GJ, 25
Hoshino T: *See* Suzuki Y, Aita S, Hoshino T, Iwata H, ... 89a
Houghton DC, Hartnett M, Campbell-Boswell M, Porter G, Bennett W: A light and electron microscopic analysis of gentamicin nephrotoxicity in rats (March), ... 589
Hummeler K: *See* Buck BE, States E, Hummeler K, Segal S, ... 21a
Huntsman H: *See* Verity MA, Brown WJ, Cheung M, Huntsman H, ... 39a
Hutchins GM, Miner MM, Boitnott JK: Vessel caliber and branch-angle of human coronary artery branch-points (February), ... 27a
Hutchins GM: *See* Bulkley BH, Hutchins GM, ... 71a

Incze JS, Lui PS, Newitt J: The conversion of black and white electron photomicrographs into color (February), ... 85a
Irey NS: Teaching monograph: Pathobiology of neoplasia (March), ... 613
Ito A: *See* Furth J, Ito A, Kaul DK, ... 59a
Iwata H: *See* Suzuki Y, Aita S, Hoshino T, Iwata H, ... 89a

Jacobs LR: *See* Margolis G, Jacobs LR, Kilham L, ... 64a
Jaeschke W: *See* Valdivia E, Hensley G, Wu J, Leroy EP, Jaeschke W, ... 44a
James IS: *See* Meier W, Blumenfeld I, James IS, Driscoll J Jr, ... 6a
James LS: *See* Cerreta JM, James LS, Stark RI, Mandi I, Fierer JA, ... 42a
Jasper GE: *See* Lane BP, Jasper GE, Mass MJ, Drummond EJ, ... 32a
Jauregui HO, Dyer C, Hawkins H, Bradford WD, Kinney TD: The effects of iron on the cell cycle of HeLa cells (February), ... 77a
Jauregui HO, Graham R, Kinney TD, Menzel DB: Cell surface studies in malignancy. II. Action of trypsin on HeLa cell surface proteins (February), ... 30a
Jennings RB: *See* Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, Jennings RB, ... 23a
Jensen P, Winger L, Rasmussen H, Nowell P: Comparative mitogenic responses of human lymphocytes to PHA and a divalent cation ionophore (February), ... 65a
Joel M: *See* Von Lichtenberg F, Sher FA, Byram JE III, Joel M, ... 67a
Johnson LA, Wirostko E: Induction of chronic lethal Australia antigen hepatitis in mice (January), ... 85
Jones M: *See* Min K-W, Gyorkey F, Davis JS, Jones M, Gyorkey P, ... 28a
Jones RK: *See* Slauson DO, Hahn FF, Benjamin SA, Chiffelle TL, Jones RK, ... 549
Jones RM, Fischer-Dzoga K, Wissler RW: Scanning and transmission electron microscopic studies of the effects of hyperlipemic serum on cultured rhesus monkey aortic medial cells (February), ... 70a
Junker J: *See* Sommer JR, Junker J, ... 26a

Kallman KD: *See* Sobel HJ, Marquet E, Kallman KD, Corley GJ, ... 441

Kapanci Y: *See* Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ, 76a
Kasemsri S, Nickerson PA: Quantitative ultrastructural study of the rat adrenal cortex in renal encapsulation-induced hypertension (January), 143
Kaul DK: *See* Furth J, Ito A, Kaul DK, 59a
Kawashima K: *See* Lev R, Kawashima K, Glass GBJ, 39a
Kedys M: *See* Hass G, Scott RA, Kedys M, Newton J, 71a
Kelly RH, Balfour BM, Armstrong JA: Lymph-borne Langerhans cells (February), 85a
Kilham L: *See* Margolis G, Jacobs LR, Kilham L, 64a
Kim DU: *See* Tourville DR, Byrd LH, Kim DU, Zajd D, Lee I, Reichman LB, Baskin S, 479
Kinney TD: *See* Jauregui HO, Dyer C, Hawkins H, Bradford WD, Kinney TD, 77a
Kinney TD: *See* Jauregui HO, Graham R, Kinney TD, Menzel DB, 30a
Kirkman HN: *See* Malouf N, Kirkman HN, Buchanan PD, 13a
Klassen J: *See* Forbes RDC, Guttmann RD, Kuramochi T, Klassen J, Knaack J, 66a
Kleinerman ES: *See* lDaniels CA, Kleinerman ES, Snyderman R, 78a
Kleinerman J, Sorensen J, Rynbrandt D: Chronic bronchitis in the cat produced by chronic methacholine administration (February), 45a
Kleinerman J: *See* Liotta LA, Kleinerman J, Saidel G, 75a
Klintworth GK, Smith C: Tissue culture studies in macular corneal dystrophy (February), 61a
Klintworth GK: *See* Fromer CH, Klintworth GK, 51a, 157
Klionsky B: *See* Fujikura T, Klionsky B, 91a
Knaack J: *See* Forbes RDC, Guttman RD, Kuramochi T, Klassen J, Knaack J, 66a
Kohn G: *See* Ornoy A, Sekeles E, Smith P, Simkin A, Kohn G, 71
Konrad K: *See* Reed G, Pysher T, Konrad K, 10a
Kraus SJ: *See* Chandler FW Jr, Kraus SJ, 437
Krigman MR, Bouldin TW, Mushak P: Cerebral vasculopathy in the lead-intoxicated suckling rat (February), 18a
Krook LP: *See* Sandefeldt E, Cummings JF, de Lahunta A, Bjorck G, Krook LP, 649
Kunz HW: *See* Gill TJ III, Cramer DV, Shonnard J, 63a
Kuramochi T: *See* Forbes RDC, Guttmann RD, Kuramochi T, Klassen J, Knaack J, 66a

Ladoulis CT, Misra DN, Gill TJ III: The distribution of immunoglobulins within thymic lymphocyte plasma membranes (February), 80a
Laing G: *See* McCreary P, Laing G, Hass GM, 87a
Lamm ME: *See* Poger ME, Hirsch BR, Lamm ME, 327
Landing BH: *See* Mahnovski V, Landing BH, Bojanic N, Tasic G, Filipovic D, 13a
Lane BP, Jasper GE, Mass MJ, Drummond EJ: Chemical carcinogenesis in transplanted rat tracheas (February), 32a
Larson EJ, Philip AGS: Congenital anomalies in homozygous α-thalassemia (February), 6a
Lavietes MH: *See* Davis CR, Rochester DF, Lavietes MH, Hagstrom JWC, 83a
Lee I: *See* Tourville DR, Byrd LH, Kim DU, Zajd D, Lee I, Reichman LB, Baskin S, 479
Lee SC: *See* Crussi FG, Lee SG, 90a
Lehner NDM: *See* Bond MG, Bullock BC, Clarkson TB, Lehner NDM, 69a
Leith JT: *See* Woodruff KH, Leith JT, Lyman JT, Tobias CA, 287
Leroy EP: *See* Valdivia E, Hensley G, Wu J, Leroy EP, Jaeschke W, 44a
Lev R, Kawashima K, Glass GBJ: Healing of gastric mucosal ulcers induced by restraint and alcohol (February), 39a
Levine G, Mierau G, Favara BE: Hepatic glycogenosis, renal cysts and hepatocarcinoma (February), 16a
Levine S, Sowinski R: Necrotic myelopathy (myelomalacia) in rats with allergic encephalomyelitis treated with tilorone (February), 381
Levison H: *See* Cutz E, Levison H, Orange RP, 45a
Lewandowski RC Jr: *See* Yunis JJ, Lewandowski RC Jr, 18a
Lie JT, Davis JS, Tacker WA, Geddes LA: Histopathology and ultrastructure of myocardial injury caused by overdosed electrical defibrillation shocks (February), 25a

Liebow AA: *See* Dail D, Liebow AA, ... 43a
Like AA, Rossini A: Streptozotocin-induced pancreatic islitis: A new mode of diabetes mellitus (February), ... 60a
Lindsey JR: *See* Overcash RG, Lindsey JR, Cassell GH, Baker HJ, ... 171
Liotta LA, Kleinerman J, Saidel G: The inhibition of pulmonary metastases by BCG (February), ... 75a
Lui PS: *See* Incze JS, Lui PS, Newitt J, ... 85a
Lumnitz JS, Reichenbach DD: Effects of vitamin E–deficient diet on rat myocardium, skeletal muscle and lung (February), ... 27a
Lyman JT: *See* Woodruff KH, Leith JT, Lyman JT, Tobias CA, ... 287

Mahan GB: *See* Esterly JR, Mahan GB, ... 10a
Mahnovski V, Landing BH, Bojanic N, Tasic G, Filipovic D: Intestinal mucosa in children with celiac disease (February), ... 13a
Malinin TI, Hensley GT: Procurement of cadaver allografts: A function of an autopsy service (February), ... 86a
Malouf N, Kirkman HN, Buchanan PD: Ultrastructural changes in antenatal Fabry's disease (February), ... 13a
Mandi I: *See* Cerreta JM, James LS, Stark RI, Mandi I, Fierer JA, ... 42a
Mandi I: *See* Fierer JA, Cerreta JM, Turino GM, Mandi I, ... 42a
Margolis G, Jacobs LR, Kilham L: The selective tropism of K-virus for pulmonary endothelium in relation to varying levels of oxygen tension (February), ... 64a
Marin-Padilla M, Marin-Padilla TM: Malformation of the occipital bone in human chondrodystrophies (February), ... 4a
Marin-Padilla TM: *See* Marin-Padilla M, Marin-Padilla TM, ... 4a
Marquet E: *See* Sobel HJ, Marquet E, Kallman KD, Corley GJ, ... 441
Marsh WH: *See* Parsa I, Marsh WH, ... 119
Martin R: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Martinez AJ, Sotelo-Avila C, Tamayo JG, Willaert E, Stamm WP: Amebic encephalitis: Cliniconeuropathologic analysis of 18 cases (February), ... 86a
Martonffy K: *See* Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, Jennings RB, ... 23a
Maskai N, Goodman PA, Bernstein J: IgA nephropathy: Uncommon morphologic features (February), ... 54a
Mason RG, Wolf RH, Zucker WH, Shinoda BA: Dynamics of thrombus formation on an artificial surface *in vivo* (March), ... 445
Mason RG: *See* Zucker WH, Mason RG, ... 143
Mass MJ: *See* Lane BP, Jasper GE, Mass MJ, Drummond EJ, ... 32a
Mathur M, Deo MG: Kinetics of proliferation and differentiation in the hair follicle and epidermis in neonatally undernourished rats (January), ... 9
McAdams AJ: *See* Bove KE, McAdams AJ, ... 7a
McConahey PJ: *See* Del Villano BC, Croker BP, McConahey PJ, Dixon FJ, ... 299
McCreadie SR, Newton WA: Nomenclature and staging of pediatric tumors (February), ... 2a
McCreadie SR, Newton WA: Review of current studies, Children's Cancer Study Group (February), ... 2a
McCreadie SR: *See* Newton WA, McCreadie SR, ... 2a
McCreary P, Laing G, Hass GM: A unique method for single dose immunization of rats against malignant lymphoma (February), ... 87a
McDonald S: *See* Stuard ID, McDonald S, Rubin P, ... 46a
McGregor DH, Cohn DV, Chu LLH: Conversion of proparathormone to parathormone in human parathyroid tissue (February), ... 59a
McGuire EJ: *See* De la Iglesia FA, Sturgess JM, McGuire EJ, Feuer G, ... 61
McGuire WL: Hormones and their receptors in breast cancer (February), ... 74a
McKeever PE: *See* Garvin AJ, Spicer SS, McKeever PE, ... 457
McNiff J: *See* Ming S-C, McNiff J, ... 315
McPherson R, Onstad J, Ugoretz R, Wolf P: An investigation of the coagulopathy associated with systemic amyloidosis (February), ... 87a

Meier W, Blumenfeld I, James IS, Driscoll J Jr: Pulmonary effluent lecithin:sphingomyeline ratios in respiratory distress syndrome (February), 6a
Mejia C; *See* Salinas-Madrigal L, Mejia C, Rivera J, 8a
Mellors JW: *See* Mellors RC, Mellors JW, 79a
Mellors RC, Mellors JW: Type C RNA virus-related antigen in fulminant fatal systemic lupus erythematosus (February), 79a
Menzel DB: *See* Jauregui HO, Graham R, Kinney TD, Menzel DB, 30a
Michalopoulos G: *See* Pitot HC, Michalopoulos G, Sattler C, Sattler G, 47a
Midgley AR: Hormone regulation of hormone receptors in ovarian tissue (February), 74a
Mierau G, Favara BE: Ultrastructure of rhabdomyosarcoma (February), 1a
Mierau G: *See* Levine G, Mierau G, Favara BE, 16a
Mierau GW: *See* Robinson CC, Varnell JL, Mierau GW, Favara BE, 15a
Miller A III: *See* Coogan PS, Miller A III, Pellettiere EV, Hass GM, 33a
Milunksy A: Prenatal genetic diagnoses (February), 3a
Min K-W, Gyorkey F, Davis JS, Jones M, Gyorkey P: Polyarteritis nodosa and HB_sAg (February), 28a
Miner MM: *See* Hutchins GM, Miner MM, Boitnott JK, 27a
Ming S-C, McNiff J: Acute ischemic changes in intestinal muscularis (February), 315
Misra DN: *See* Ladoulis CT, Misra DN, Gill TJ III, 80a
Mitsudo S, Wigger HJ: Fibrous histiocytoma simulating congenital fibromatosis (February), 91a
Montour JL: *See* Holck S, Montour JL, 84a
Morecki R, Goldfischer S: Fatal neonatal liver failure in Type II Gaucher's disease (February), 12a
Morrison AM: *See* Shea SM, Morrison AB, 53a
Morrissey RL: *See* Empson RN, Bucci TJ, Morrissey RL, Chandler JS, 55a
Moslen MT, Reynolds ES, Szabo S: Acute tricloroethylene hepatotoxicity and induction of microsomal enzymes (February), 36a
Mowry RW: The distribution and relative number of pancreatic islet B cells in newborn infants, using a two-step (pH 0.5 + pH 2.6) alcian blue–modified aldehyde fuchsin stain (February), 61a
Mueller TJ: *See* Casey AE, Hall LM, Downey EL, Copeland H, Mueller TJ, 56a
Müller-Berghaus G, Reuter C, Bleyl U: Experimental galactosamine-induced hepatitis: Effect of anticoagulant and antifibrinolytic agents on microclot formation (February), 393
Munjal D: *See* Goldenberg DM, Pant KD, Munjal D, Dahlman H, 31a
Murad TM: *See* Pretlow TP, Pretlow TG, Murad TM, Zieman GA, 35a
Mushak P: *See* Krigman MR, Bouldin TW, Mushak P, 18a

Naeye RL, Fisher R: Cardiac and other abnormalities in the sudden infant death syndrome (February), 92a
Naeye RL, Fisher R: Carotid body abnormalities in the sudden infant death syndrome (February), 29a
Naeye RL, Whalen P, Ryser M, Fisher R: Cardiac and other abnormalities in the sudden infant death syndrome (January), 1
Nagel D: *See* Toth B, Nagel D, 40a
Nakajo MM, Fidanian H, Weringer EJ, Arquilla ER: Collagen synthesis in wound healing of diabetic mice (February), 58a
Newitt J: *See* Incze JS, Lui PS, Newitt J, 85a
Newton J: *See* Hass G, Scott RA, Kedys M, Newwton J, 71a
Newton WA, McCreadie SR: Histologic grading of neuroblastomas with clinical correlation (February), 2a
Newton WA: *See* McCreadie SR, Newton WA, 2a
Newton WA Jr, Soule E: Childhood sarcomas of undetermined histogenesis: Comparison with childhood rhabdomyosarcoma (February), 1a
Nickerson PA: *See* Kasemsri S, Nickerson PA, 143
Norback DH, Seymour JL, Allen JR: Metabolic study on ^{2}H-2,4,5,2′,4′,5′hexachlorobiphenyl and ^{3}H-2,5,2′,5′-tetrachlorobiphenyl in rats (February), 36a

Norman M: *See* Witzleben CL, Norman M, ... 92
Nowell PL: *See* Jensen P, Winger L, Rasmussen H, Nowell P, ... 65a

Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallo GR, Cohen MW: Experimental toxemia of pregnancy (February), ... 80a
Onstad J: *See* McPherson R, Onstad J, Ugoretz R, Wolf P, ... 87a
Opler SR, Shea LP: Morphologic correlation of the presence and size of acute myocardial infarcts detected by gamma camera scintigraphy and autopsy studies (February), ... 25a
Orange RP: *See* Cutz E, Levison H, Orange Rp, ... 45a
Ornoy A, Sekeles E, Smith P, Simkin A, Kohn G: Achondrogenesis Type I in three sibling fetuses: Scanning and electron microscopic studies (January), ... 71
Orsi EV: *See* Ende N, Orsi EV, Britten TL, Baturay NZ, ... 55a
Overcash RG, Lindsey JR, Cassell GH, Baker HJ: Enhancement of natural and experimental respiratory mycoplasmosis in rats by hexamethylphosphoramide (January), ... 171
Oxenhandler R, Hart M, Corman L, Sharp G, Adelstein E: Muscle pathology in mixed connective tissue disease (February), ... 28a

Pachter BR, Davidowitz J, Breinin GM: Structural alterations of the junctional region in extraocular muscle of dystrophic mice. II. Hypertrophy of the neuromuscular junctional apparatus (January), ... 111
Pachter BR: *See* Davidowitz J, Pachter BR, Philips G, Breinin GM, ... 101
Pant KD: *See* Goldenberg DM, Pant KD, Munjal D, Dahlman H, ... 31a
Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J: Incidence and significance of ultrastructural glomerular lesions not visible on light microscopy in childhood lipoid nephrosis (February), ... 20a
Parkey RW: *See* Buja LM, Dees JH, Parkey RW, Stokely EM, Bonte FJ, Willerson JT, ... 24a
Parsa I, Marsh WH: Long-term organ culture of embryonic rat pancreas in a chemically defined medium (January), ... 119
Pauli BU: *See* Alroy J, Weinstein RS, Pauli BU, ... 31a
Pellettiere EV: *See* Coogan PS, Miller A III, Pellettiere EV, Hass GM, ... 33a
Philip AGS: *See* Larson Ej, Philip AGS, ... 6a
Philips G: *See* Davidowitz J, Pachter BR, Philips G, Breinin GM, ... 101
Pickett JP: *See* Bradford WD, Pickett JP, Hackel DB, ... 22a
Pirani CL: *See* Ober WB, Abitol MM, Pirani CL, Driscoll SG, Gallo GR, Cohen MW, ... 80a
Pitot HC, Michalopoulos G, Sattler C, Sattler G: Drug metabolism in primary liver cell cultures (February), ... 47a
Poger ME, Hirsch BR, Lamm ME: Synthesis of secretory component by colonic neoplasms (February), ... 327
Pollard M: Therapy of metastatic prostate adenocarcinomas in rats (February), .. 33a
Pollard M: *See* Chang CF, Pollard M, ... 33a
Porter DD: *See* Prince GA, Porter DD, ... 339
Porter G: *See* Houghton DC, Hartnett M, Campbell-Boswell M, Porter G, Bennett W, ... 589
Porush JG: *See* Grishman E, Churg J, Porush JG, ... 57a
Powell H, Wolf P: Neutrophilic leukocyte inclusions in colchicine intoxication (February), ... 88a
Pretlow TG: *See* Pretlow TP, Pretlow TG, Murad TM, Zieman GA, ... 35a
Pretlow TP, Pretlow TG, Murad TM, Zieman GA: Purification of single kinds of cells from a mast cell tumor (February), ... 35a
Price RA: *See* Birdwell DA, Price RA, ... 20a
Primus FJ: *See* Goldenberg DM, Sharkey Rm, Primus FJ, ... 74a
Prince GA, Porter DD: The pathogenesis of respiratory syncytial virus infection in infant ferrets (February), ... 339
Pysher T: *See* Reed G, Pysher T, Konrad K, ... 10a

Quinn JL III: *See* Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, Jennings RB, ... 23a

Rabin BS, Rogers SJ: The role of anti-intestinal antibody in experimental inflammatory bowel disease (February), ... 88a
Rasmussen H: *See* Jensen P, Winger L, Rasmussen H, Nowell P, ... 65a
Reddy JK: Nafenopin: A hypolipidemic hepatic peroxisome proliferator that induces hepatocellular carcinomas in mice (February), ... 37a
Reddy KP, Buschmann RJ, Chomet B: Experimentally induced mucinous cholangiocarcinomas: A light and electron microscopic study (February), ... 37a
Reed G, Pysher T, Konrad K: Drug effects of fetal rat lung organ cultures (February), ... 10a
Reichenbach DD: *See* Lumnitz JS, Reichenbach DD, ... 27a
Reichman LB: *See* Tourville DR, Byrd LH, Kim Du, Zajd D, Lee I, Reichman LB, Baskin S, ... 479
Reid L: Prenatal vascular development (February), ... 9a
Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, Jennings RB: Cardiac localization of ^{99m}Te-pyrophosphate after temporary or permanent coronary occlusion in dogs (February), ... 23a
Rennke HG: *See* Seiler MW, Rennke HG, Cotran RS, Venkatachalam MA, ... 54a
Reuter C: *See* Müller-Berghaus G, Reuter C, Bleyl U, ... 393
Reynolds EOR: *See* Taghizadeh A, Reynolds EOR, ... 241
Reynolds ES: *See* Boor PJ, Reynolds ES, Fishbein MC, ... 26a
Reynolds ES: *See* Moslen MT, Reynolds ES, Szabo S, ... 36a
Reynolds ES: *See* Szabo S, Haith LR Jr, Reynolds ES, ... 40a
Richardson J: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Rivera J: *See* Salinas-Madrigal L, Mejia C, Rivera J, ... 8a
Robinson CC, Varnell JL, Mierau GW, Favara BE: Attempted herpes simplex virus isolation from trigeminal ganglia of children (February), ... 15a
Rochester DF: *See* Davis CR, Rochester DF, Lavietes MH, Hagstrom JWC, ... 83a
Rogers SJ: *See* Rabin BS, Rogers SJ, ... 88a
Rosai J: *See* Dehner LP, Askin FB, Rosai J, ... 2a
Rosenberg HS: *See* Singer DB, Rosenberg HS, Gillete PC, ... 22a
Rosenberg HS: *See* Singer DB, Rosenberg HS, Haynes BF, South MA, ... 23a
Rossini A: *See* Like AA, Rossini A, ... 60a
Roth J: Insulin resistance, insulin sensitivity, and insulin receptors (February), ... 73a
Roth LM: *See* Crussi FG, Roth LM, Henry MM, ... 17a
Rowlands DT Jr: *See* Daniele RP, Rowlands DT Jr, ... 76a
Rubin P: *See* Stuard ID, McDonald S, Rubin P, ... 46a
Ruiz A: *See* Frenkel JK, Ruiz A, ... 52a
Ryan SF, Bell ALL Jr, Barrett CR Jr: Experimental acute alveolar injury in the dog: Morphologic–mechanical correlations (February), ... 353
Rynbrandt D: *See* Kleinerman J, Sorensen J, Rynbrandt D, ... 44a
Ryser M: *See* Naeye RL, Whalen P, Ryser M, Fisher R, ... 1

Saidel G: *See* Liotta LA, Kleinerman J, Saidel G, ... 75a
Salinas-Madrigal L, Mejia C, Rivera J: The renal juxtaglomerular apparatus in cyanotic congenital heart diseases (February), ... 8a
Sandefeldt E, Cummings JF, de Lahunta A, Bjorck G, Krook LP: Animal Model of Human Disease: Infantile spinal muscular atrophy, Werdnig-Hoffman disease (March), ... 649
Sannes PL, Spicer SS: Cytochemical evidence for dipeptidyl amino peptidase-II (DAP-II) activity in autophagic and heterophagic processes in rat peritoneal macrophages (February), ... 49a
Sattler C: *See* Pitot HC, Michalopoulos G, Sattler C, Sattler G, ... 47a
Sattler G; *See* Pitot HC, Michalopoulos G, Sattler C, Sattler G, ... 47a
Schain R; *See* Brown WJ, Ventilla M, Schain R, ... 19a
Scheeberger JC: *See* Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ, ... 76a

Schollmeyer JE, Furcht LT, Wendelschafer-Crabb G: Contractile proteins in normal and transformed fibroblasts (February), ... 30a
Schrader WT: Molecular mechanisms of steroid hormone action (February), ... 74a
Schumacher BL: *See* Reimer KA, Martonffy K, Schumacher BL, Henkin RE, Quinn JL III, Jennings RB, ... 23a
Scott RA: *See* Hass G, Scott RA, Kedys M, Newton J, ... 71a
Scott RE: Plasma membrane vesiculation: A new membrane isolation technic (February), ... 48a
Segal S: *See* Buck BE, States E, Hummeler K, Segal S, ... 21a
Seiler MW, Rennke HG, Cotran RS, Venkatachalam MA: Distribution of glomerular anionic sites as revealed by polycationic compounds (February), ... 54a
Sekeles E: *See* Ornoy A, Sekeles E, Smith P, Simkin A, Lohn G, ... 71
Serio CS, Cruse JM: *In vitro* characterization of C3 receptors on the cell surface membrane of normal and immune macrophage subpopulations (February), ... 89a
Serio CS: *See* Barnes GW, Cruse JM, Hickenbottom JP, Serio CS, ... 81a
Setter KR: *See* Cuppage FE, Setter KR, Sullivan LP, ... 56a
Seymour JL: *See* Norback DH, Seymour JL, Allen JR, ... 36a
Shanklin DR: Clinicopathologic correlates in placentas from women with sickle cell disease (February), ... 5a
Sharkey RM: *See* Goldenberg DM, Sharkey RM, Primus FJ, ... 74a
Sharp G: *See* Oxenhandler R, Hart M, Corman L, Sharp G, Adelstein E, ... 28a
Shea LP: *See* Opler SR, Shea LP 25a
Shea SM, Morrison AM: Glomerular filtration surfaces in the subtotally nephrectomized rat: A stereologic electron microscopic study (February), ... 53a
Shelburne JD: *See* Bradford WD, Shelburne JD, Hawkins HK, ... 12a
Sher FA: *See* Von Lichtenberg F, Sher FA, Byram JE III, Joel M, ... 67a
Shinoda BA: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, ... 445
Shonnard J, Cramer DV, Davis BK, Gill TJ III: The *in vitro* proliferative response to poly ($Glu^{52}Lys^{33}Tyr^{15}$) in inbred rats (February), ... 63a
Shonnard J: *See* Davis BK, Shonnard J, Gill TJ III, ... 62a
Shonnard J: *See* Gill TJ III, Kunz HW, Cramer DV, Shonnard J, ... 63a
Shwachman H: Properties of meconium of diagnostic implication (February), ... 3a
Shwachman H: *See* Geller A, Gilles F, Shwachman H, Carlin D, ... 5a
Sim JS, French SW: Identification of Mallory bodies with peroxidase-immunoglobulin complex (February), ... 50a
Simkin A: *See* Ornoy A, Sekeles E, Smith P, Simkin A, Kohn G, ... 71
Singer DB, Rosenberg HS, Gillette PC: Calcification of the aortic root in two girls (February), ... 22a
Singer DB, Rosenberg HS, Haynes BF, South MA: Progressive severe combined immunodeficiency disease (February), ... 23a
Singh P: *See* Wolf PL, Winters P, Singh P, ... 52a
Slauson DO, Hahn FF, Benjamin SA, Chiffelle TL, Jones RK: Inflammatory sequences in acute pulmonary radiation injury (March), ... 549
Smith C: *See* Klintworth GK, Smith C, ... 61a
Smith JE: Animal Model of Human Disease: Inherited erythrocyte glutathione deficiency (January), ... 233
Smith P: *See* Ornoy A, Sekeles E, Smith P, Simkin A, Kohn G, ... 71
Snyderman RL *See* Daniels CA, Kleinerman ES, Snyderman R, ... 78a
Sobel HJ, Marquet E, Kallman KD, Corley GJ: Animal Model of Human Disease: Malignant melanoma (February), ... 441
Sommer JR, Junker J: Corbular sarcoplasmic reticulum of cardiac muscle (February), ... 26a
Sommer JR, Waugh RA: Review article: The ultrastructure of the mammalian cardiac muscle cell—with special emphasis on the tubular membrane systems (January), ... 191
Sondheimer J: *See* Cutz E, Sondheimer J, Forstner GG, Weber JL, ... 11a
Sorensen J: *See* Kleinerman J, Sorensen J, Rynbrandt D, ... 44a
Sotelo-Avila C: *See* Martinez AJ, Sotelo-Avila C, Tamyo JG, Willaert E, Stamm WP, ... 86a
Soule E: *See* Newton WA Jr, Soule E, ... 1a

South MA: *See* Singer DB, Rosenberg HS, Haynes BF, South MA, ... 23a
Sowinski R: *See* Levine S, Sowinski R, ... 381
Sparling JM: *See* Crocker JFS, Stewart AG, Sparling JM, Bruneau ME, ... 373
Spencer B: *See* Drake Rm, Franciosi RA, Spencer B, Baker T, ... 8a
Spicer SS: *See* Garvin AJ, Spicer SS, McKeever PE, ... 457
Spicer SS: *See* Sannes PL, Spicer SS, ... 49a
Stamm WP: *See* Martinez AJ, Sotelo-Avila C, Tamayo JG, Willaert E, Stamm WP, .. 86a
Stark RI: *See* Cerreta JM, James LS, Stark RI, Mandi I, Fierer JA, ... 42a
Stary HC: Giant membrane complexes in the foam cells of regressing atherosclerotic lesions (February), ... 70a
States B: *See* Buck BE, States E, Hummeler K, Segal S, ... 21a
Steiner D: Some new aspects of insulin biosynthesis (February), ... 73a
Stettler L: *See* Bonikos D, Bensch K, Stettler L, Groth D, ... 46a
Stewart AG: *See* Crocker JFS, Stewart AG, Sparling JM, Bruneau ME, ... 373
Stocker JT: Persistent interstitial emphysema with giant cell reaction in the neonatal period (February), ... 6a
Stokely EM: *See* Buja LM, Dees JH, Parkey RW, Stokely EM, Bonte FJ, Willerson JT, ... 24a
Strauss J: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Stuard ID, McDonald S, Rubin P: Quantitative dose response radiation induced injury in human lungs (February), ... 46a
Sturgess JM: *See* de la Iglesia FA, Sturgess JM, McGuire EJ, Feuer G, ... 61
Sullivan LP: *See* Cuppage FE, Setter KR, Sullivan LP, ... 56a
Suzuki Y, Aita S, Hoshino T, Iwata H: Application of analytical electron microscopy for detection of submicroscopic asbestos in tissues (February), ... 89a
Swank RT: *See* Brandt EJ, Swank RT, ... 573
Sweet HO: *See* Green MC, Sweet HO, Bunker LE, ... 493
Szabo S: Animal Model of Human Disease: Waterhouse-Friderichsen syndrome (March), ... 653
Szabo S, Haith LR Jr, Reynolds ES: Chemical induction of chronic duodenal ulcer in the rat (February), ... 40a
Szabo S: *See* Moslen MT, Reynolds ES, Szabo S, ... 36a

Tacker WA: *See* Lie JT, Davis JS, Tacker WA, Geddes LA, ... 25a
Taghizadeh A, Reynolds EOR: Pathogenesis of bronchopulmonary dysplasia following hyaline membrane disease (February), ... 241
Tamayo JG: *See* Martinez AJ, Sotelo-Avila C, Tamayo JG, Willaert E, Stamm WP, .. 86a
Tasic G: *See* Mahnovski V, Landing BH, Bojanic N, Tasic G, Filipovic D, ... 13a
Tewari RP: *See* Baker RD, Tewari Rp, Haught JE, ... 81a
Thompson JS: *See* Blair JD, Thompson JS, Hernandez B, ... 15a
Tobias CA: *See* Woodruff KH, Leith JT, Lyman JT, Tobias CA, ... 287
Toth B, Nagel D: Tumorigenesis investigations with β-phenylethylhydrazine sulfate, phenylhydrazine hydrochloride and allylhydrazine hydrochloride in mice (February), ... 40a
Tourville DR, Byrd LH, Kim DU, Aajd D, Lee I, Reichman LB, Baskin S: Treponemal antigen in immunopathogenesis of syphilitic glomerulonephritis (March), ... 479
Trenchev P: *See* Gabbiani G, Scheeberger JC, Csank-Brassert J, Kapanci Y, Trenchev P, Holborow EJ, ... 76a
Trofatter KF, Daniels CA: Studies on complement-mediated immune cytolysis of herpes simplex virus–infected human fibroblasts (February), ... 78a
Turino GM: *See* Fierer JA, Cerreta JM, Turino GM, Mandi I, ... 42a

Ugoretz R: *See* McPherson R, Onstad J, Ugoretz R, Wolf P, ... 87a

Valdivia E, Hensley G, Wu J, Leroy EP, Jaeschke W: Desquamative interstitial pneumonitis (February), ... 44a
Varnell JL: *See* Robinson CC, Varnell JL, Mierau GW, Favara BE, ... 15a
Venkatachalam MA: *See* Seiler MW, Rennke HG, Cotran RS, Venkatachalam MA, 54a
Ventilla M: *See* Brown WJ, Ventilla M, Schain R, ... 19a

Verity MA, Brown WJ, Cheung M, Huntsman H: Mercuric encephalopathy: Induced synaptosome protein and DNA synthetic defects (February), ... 39a
Von Lichtenberg F, Sher FA, Byram JE III, Joel M: Potentiation of granulomatous inflammation by lentinan (February), ... 67a

Wagner WD: *See* Bullock BC, Wagner WD, Bond MG, Clarkson TB, ... 82a
Wang NS, Ying WL: The elastica network of the alveolus by scanning electron microscopy (February), ... 43a
Waugh RA: *See* Sommer JR, Waugh RA, ... 191
Weber JL: *See* Cutz E, Sondheimer J, Forstner GG, Weber JL, ... 11a
Weinstein RS: *See* Alroy J, Weinstein RS, Pauli BU, ... 31a
Weinstein RS: *See* Gould VE, Weinstein RS, ... 84a
Wendelschafer-Crabb G: *See* Schollmeyer JE, Furcht LT, Wendelschafer-Crabb G, ... 30a
Wenger J: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Weringer EJ, Arquilla ER: Effects of diabetes and insulin on capillary morphogenesis in healing wounds (February), ... 58a
Weringer EJ: *See* Nakajo MM, Fidanian H, Weringer EJ, Arquilla ER, ... 58a
Whalen P: *See* Naeye RL, Whalen P, Ryser M, Fisher R, ... 1
White JG: *See* Gerrard JM, White JG, ... 513
Whiteside TL: Reactivity of anti-human brain serum with human lymphocytes (February), ... 67a
Wigger HJ: *See* Mitsudo S, Wigger HJ, ... 91a
Willaert E: *See* Martinez AJ, Sotelo-Avila C, Tamayo JG, Willaert E, Stamm WP, ... 86a
Willerson JT: *See* Buja LM, Dees JH, Parkey RW, STokely EM, Bonte FJ, Willerson JT, ... 24a
Winger L: *See* Jensen P, Winger L, Rasmussen H, Nowell P, ... 65a
Winters P: *See* Wolf PL, Winters P, Singh P, ... 52a
Wirostko E: *See* Johnson LA, Wirostko E, ... 85
Wissler RW: *See* Jones RM, Fischer-Dzoga K, Wissler RW, ... 70a
Witzleben CL, Norman M: Glomerular pathology in congenital nephrotic syndrome (microcystic type)—an indicator of pathogenesis? (February), ... 9a
Wolf P, Winters P, Singh P: An analysis of blood adenosine triphosphate in various disease states (February), ... 52a
Wolf P: *See* McPherson R, Onstad J, Ugoertz R, Wolf P, ... 87a
Wolf P: *See* Powell H, Wolf P, ... 88a
Wolf RH: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, ... 445
Woodruff KH, Leith JT, Lyman JT, Tobias CA: Morphologic and morphometric analysis of the early effects of x-ray and heavy-ion irradiation of hamster lung (February), ... 287
Wu J: *See* Valdivia E, Hensley G, Wu J, Leroy EP, Jaeschke W, ... 44a

Yang H,-Y: *See* Pardo V, Bertoli F, Yang H-Y, Wenger J, Richardson J, Martin R, Strauss J, ... 20a
Yang SS, Heidelberger KP, Brough AJ, Corbett DP, Bernstein J: Cervical myelopathy in achondroplasia (February), ... 4a
Ying WL: *See* Wang NS, Ying WL, ... 43a
Yunis EJ, Agostini RM Jr, Glew RH: Fine structural observations of the liver in α-antitrypsin deficiency (February), ... 265
Yunis JJ, Lewandowski RC Jr: High resolution G-banded prophase chromosomes and detection of minute chromosomal abnormalities in birth defects and neoplasia (February), ... 18a

Zajd D: *See* Tourville DR, Byrd LH, Kim DU, Zajd D, Lee I, Reichman LB, Baskin S, ... 479
Zieman GA: *See* Pretlow TP, Pretlow TG, Murad TM, Zieman GA, ... 35a
Zucker WH, Mason RG: Ultrastructural aspects of interactions of platelets with microcrystalline collagen (January), ... 129
Zucker WH: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, ... 445

The American Journal of PATHOLOGY

OFFICIAL PUBLICATION OF
THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS
THE AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY

Volume 82, 1976

(January through March)

BOARD OF EDITORS
Thomas D. Kinney, Editor-in-Chief
Donald B. Hackel, Associate Editor

Orville T. Bailey
Carl G. Becker
Frederick F. Becker
Baruj Benacerraf
Kurt Benirschke
Colin Bloor
Joel G. Brunson
John R. Carter
Charles G. Cochrane
John M. Craig
Frank J. Dixon, Jr.
John T. Ellis
Emmanuel Farber
Frank W. Fitch
Patrick J. Fitzgerald
David G. Freiman
Jack C. Geer
Thomas J. Gill III
Gabriel Godman
John B. Hazard
Paul Kotin
Averill A. Liebow
Guido Majno
Reginald G. Mason
Donald G. McKay
Councilman Morgan
Richard L. Naeye
Henry C. Pitot
Alan S. Rabson
Goetz W. Richter
David T. Rowlands, Jr.
Edward A. Smuckler
Leon Sokoloff
Benjamin H. Spargo
Lewis Thomas
Jacinto J. Vazquez
F. Stephen Vogel
Peter A. Ward

Editorial Assistant: Virginia Hotelling

THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

COPYRIGHT © 1976

BY THE AMERICAN ASSOCIATION

OF PATHOLOGISTS AND BACTERIOLOGISTS

The American Journal of
PATHOLOGY

CONTENTS FOR VOLUME 82, 1976

January

1 Cardiac and Other Abnormalities in the Sudden Infant Death Syndrome
Richard L. Naeye, Philip Whalen, Monique Ryser, and Russell Fisher

9 Kinetics of Proliferation and Differentiation in the Hair Follicle and Epidermis in Neonatally Undernourished Rats
Meera Mathur and M. G. Deo

25 Hyperacute Renal Allograft Rejection in the Primate: Therapeutic Limitations of Antiplatelet Agents Alone and Combined With Heparin
Robert W. Colman, Mutas Habal, Norman K. Hollenberg, Alan G. Birtch, and George J. Busch

43 Successful Short-Term Modification of Hyperacute Renal Allograft Rejection in the Primate: Intrarenal Effects of Phenoxybenzamine and Methylprednisolone Combined With Heparin
George J. Busch, Antonio C. P. Martins, Norman K. Hollenberg, Roger C. Moretz, Richard E. Wilson, and Robert W. Colman

61 Quantitative Microscopic Evaluation of the Endoplasmic Reticulum in Developing Human Liver
F. A. de la Iglesia, J. M. Sturgess, E. J. McGuire, and G. Feuer

71 Achondrogenesis Type 1 in Three Sibling Fetuses: Scanning and Transmission Electron Microscopic Studies
A. Ornoy, E. Sekeles, P. Smith, A. Simkin, and G. Kohn

85 Induction of Chronic Lethal Australia Antigen Hepatitis in Mice
Lewis A. Johnson and Emil Wirostko

101 Structural Alterations of the Junctional Region in Extraocular Muscle of Dystrophic Mice. I. Modifications of Sole-Plate Nuclei
Jacob Davidowitz, Bruce R. Pachter, Gloria Philips, and Goodwin M. Breinin

111 Structural Alterations of the Junctional Region in Extraocular Muscle of Dystrophic Mice. II. Hypertrophy of the Neuromuscular Junctional Apparatus
Bruce R. Pachter, Jacob Davidowitz, and Goodwin M. Breinin

119 Long-Term Organ Culture of Embryonic Rat Pancreas in a Chemically Defined Medium
I. Parsa and W. H. Marsh

129 Ultrastructural Aspects of Interactions of Platelets With Microcrystalline Collagen
W. H. Zucker and R. G. Mason

143 Quantitative Ultrastructural Study of the Rat Adrenal Cortex in Renal Encapsulation-Induced Hypertension
Savitri Kasemsri and Peter A. Nickerson

157 An Evaluation of the Role of Leukocytes in the Pathogenesis of Experimentally Induced Corneal Vascularization. III. Studies Related to the Vasoproliferative Capability of Polymorphonuclear Leukocytes and Lymphocytes
Carl H. Fromer and Gordon K. Klintworth

171 Enhancement of Natural and Experimental Respiratory Mycoplasmosis in Rats by Hexamethylphosphoramide
Ronald G. Overcash, J. Russell Lindsey, Gail H. Cassell, and Henry J. Baker

191 REVIEW ARTICLE: The Ultrastructure of the Mammalian Cardiac Muscle Cell—With Special Emphasis on the Tubular Membrane Systems
Joachim R. Sommer and Robert A. Waugh

233 **Animal Model of Human Disease:** Inherited Erythrocyte Glutathione Deficiency
Joseph E. Smith

237 **Animal Model of Human Disease:** Chronic Bronchitis
A. Baskerville

February

241 Pathogenesis of Bronchopulmonary Dysplasia Following Hyaline Membrane Disease
A. Taghizadeh and E. O. R. Reynolds

265 Fine Structural Observations of the Liver in α-1-Antitrypsin Deficiency
Eduardo J. Yunis, Rocco M. Agostini, Jr., and Robert H. Glew

287 Morphologic and Morphometric Analysis of the Early Effects of X-Ray and Heavy-Ion Irradiation of Hamster Lung
K. H. Woodruff, J. T. Leith, J. T. Lyman, and C. A. Tobias

299 Immunopathogenicity and Oncogenicity of Murine Leukemia Viruses. II. Infection of Mice and Rats With Scripps Leukemia Virus
Bert C. Del Villano, Byron P. Croker, Patricia J. McConahey, and Frank J. Dixon

315 Acute Ischemic Changes in Intestinal Muscularis
Si-Chun Ming and Judith McNiff

327 Synthesis of Secretory Component by Colonic Neoplasms
Marshall E. Poger, Barbara R. Hirsch, and Michael E. Lamm

339 The Pathogenesis of Respiratory Syncytial Virus Infection in Infant Ferrets
Gregory A. Prince and David D. Porter

353 Experimental Acute Alveolar Injury in the Dog: Morphologic–Mechanical Correlations
Stephen F. Ryan, A. L. Loomis Bell, Jr., and C. Redington Barrett, Jr.

373 Steroid-Induced Polycystic Kidneys in the Newborn Rat: The Electrolyte and Chemical Requirements
J. F. S. Crocker, A. G. Stewart, J. M. Sparling, and M. E. Bruneau

381 Necrotic Myelopathy (Myelomalacia) in Rats With Allergic Encephalomyelitis Treated With Tilorone
Seymour Levine and Richard Sowinski

393 Experimental Galactosamine-Induced Hepatitis: Effect of Anticoagulant and Antifibrinolytic Agents on Microclot Formation
Gert Müller-Berghaus, Clemens Reuter, and Uwe Bleyl

407 REVIEW ARTICLE: Survey of Operative Congenital Heart Disease
Jesse E. Edwards

437 **Animal Model of Human Disease:** Gonorrhea
F. W. Chandler, Jr., and S. J. Kraus

441 **Animal Model of Human Disease:** Malignant Melanoma
Harold J. Sobel, Eugene Marquet, Klaus D. Kallman, and Glenna J. Corley

1a Joint Meeting of The American Association of Pathologists and Bacteriologists and The Pediatric Pathology Club: Scientific Proceedings, 1976

March

445 Dynamics of Thrombus Formation on an Artificial Surface *In Vivo*: Effects of Antithrombotic Agents
Reginald G. Mason, Robert H. Wolf, William H. Zucker, and Brian A. Shinoda

457 The Cytochemical Demonstration of Intracellular Immunoglobulin: In Neoplasms of Lymphoreticular Tissue
A. J. Garvin, S. S. Spicer, and P. E. McKeever

479 Treponemal Antigen in Immunopathogenesis of Syphilitic Glomerulonephritis
Donald R. Tourville, Lawrence H. Byrd, Dae Un Kim, David Zajd, In Lee, Lee B. Reichman, and Stuart Baskin

493 Tight-Skin, a New Mutation of the Mouse Causing Excessive Growth of Connective Tissue and Skeleton
Margaret C. Green, Hope O. Sweet, and Lester E. Bunker

513 The Influence of Aspirin and Indomethacin on the Platelet Contractile Wave
Jonathan M. Gerrard and James G. White

527 Ultrastructural Cytochemistry of the Ischemic (Endocrine) Kidney
Maria de Fatima Araujo-Nascimento, Yvon Dêsormeaux, and Marc Cantin

549 Inflammatory Sequences in Acute Pulmonary Radiation Injury
David O. Slauson, Fletcher F. Hahn, Stephen A. Benjamin, Thomas L. Chiffelle, and Robert K. Jones

573 The Chediak-Higashi (Beige) Mutation in Two Mouse Strains: Allelism and Similarity in Lysosomal Dysfunction
E. J. Brandt and Richard T. Swank

589 A Light and Electron Microscopic Analysis of Gentamicin Nephrotoxicity in Rats
Donald C. Houghton, Michael Hartnett, Mark Campbell-Boswell, George Porter, and William Bennett

613 TEACHING MONOGRAPH: Tissue Reactions to Drugs
Nelson S. Irey

649 **Animal Model of Human Disease:** Infantile Spinal Muscular Atrophy, Werdnig-Hoffman Disease
E. Sandefeldt, J. F. Cummings, A. de Lahunta, G. Björck, and L. P. Krook

653 **Animal Model of Human Disease:** Waterhouse-Friderichsen Syndrome
S. Szabo, E. S. Reynolds, and K. Kovacs

657 Index of Subjects, Volume 82
667 Index of Authors, Volume 82

Errata

The American Association of Pathologists and Bacteriologists: Seventy-second Annual Meeting. The Marriott Hotel, New Orleans, Louisiana, March 3, 1974: Business Meeting. Am J Pathol 81:695-698, 1975.

On page 695, the date of the meeting was incorrectly stated; it should read March 3, 1975.

Abstract 30. H. A. Azar, D. G. Halkias, and D. Heckerman, Effect of Tetracycline on the Induction of Tumors in BALB/c Mice. Am J Pathol 82:34a, 1975.

The authors wish the title to read: Effect of Terramycin® on the Induction of Tumors in BALB/c Mice.

Abstract 109. C. R. Davis, D. F. Rochester, M. H. Lavietes, and J. W. C. Hagstrom, Histochemical and Electron Microscopic Studies on Induced Granulomatous Disease in the Dog Lung. Am J Pathol 82:83a, 1976.

Dr. B. Min should be included as the second author of the abstract.

INDEX

SUBJECT

AUTHOR

CONTENTS FOR VOLUME 83

Index of Subjects

Volume 83, 1976

Abrasion
and epidermal regeneration, 329
Actomyosin
alcohol consumption affecting, 499
Adenoma
parathyroid, in normocalcemic hyperparathyroidism, 475
thyroid, in animals, 72, 83
Adrenal glands
medullary hyperplasia, 177
Alcohol consumption
muscle damage from, 499
Alveolar macrophages
cultured, 123
Amino acids
deprivation in HeLa cells, autophagocytosis from, 485
Aminotriazole
and platelet aggregation, 287
Amyloid
induction of, and plasma protein turnover, 299
Animal models of human disease
diabetes insipidus, hereditary hypothalamic, 633
G_{M2} gangliosidosis, 419
periodontitis, chronic destructive, 637
pituitary tumors, 423
teratoma and teratocarcinoma, 241
thyroid medullary carcinoma, 237
Antibodies
to intestinal antigen, nonpathogenicity of, 269
to renal tubular basement membrane, 228
and experimental nephritis, 531
Antithrombotic agents
in animal vascular shunt model, 557
Aorta
lipid in muscle lysosomes of, 39
Arachidonic acid
transformation by platelets, 286
Asbestos bodies
pulmonary, 432
Ascitic embryoid bodies
astrocytic differentiation from, 197
Aspergillosis
enhancement of tissue invasion in, 547
Aspirin
and thrombus deposition, 557
Astrocytes
differentiation from ascitic embryoid bodies, 197
Astrocytomas
induced by avian sarcoma virus, 149
Atherosclerosis
and endocytosis by vascular smooth muscle cells, 45
and lysosomal lipolytic activity, 39
Atrium
sarcoplasmic reticulum in mitral valve disease, 1
Autophagocytosis
induced by amino acid deprivation in HeLa cells, 485

Basement membrane
renal tubular, antibodies to, 228
and experimental nephritis, 531
Bernard-Soulier syndrome, 604
Bone
chemical inhibition of resorption, prepartal, 569
Bowel disease
immunologic, 269
Brain
cerebrospinal lipodystrophy, porcine, 419
neoplasms induced by avian sarcoma virus, 149
Breast
cancer cells of, contractile proteins in, 470

Calcitonin
in thyroid cells
in animals, 68
in medullary carcinoma in animals, 237
with pheochromocytoma, 177
Calcium
experimental parturient hypocalcemia in cows, 569
normocalcemic hyperparathyroidism, parathyroid adenomas in, 475
Carcinoma
thyroid, in animals, 71, 73, 83
Cell cultures
of alveolar macrophages, 123
neuroepithelial differentiation in, 197
and rosette formation by canine sarcoma cells, 359
of tonsillar lymphocytes, 341
Cerebrospinal lipodystrophy
porcine, 419
Chediak-Higashi syndrome, 599
Chlorites
pulmonary deposits of, 433

Cisterns
in endoplasmic reticulum, 18, 19
in sarcoplasmic reticulum, 15, 16
Clays
pulmonary desposits of, 430
Collagenase
synthesis by macrophages, 404
Colony-stimulating factor
secretion by monocytes, 407
Complement proteins
synthesis by phagocytes, 409
Contractile protein
in cancer cells, 457
***Corynebacterium parvum* vaccine**
and tissue invasion in aspergillosis, 547
Cristobalite
pulmonary deposits of, 433
Cyclodextrin
nephrosis from, 367
Cyproheptadine
and thrombus deposition, 557
Cytoplasmic fibrillar bodies
lead-induced, in kidneys, 135

Diabetes insipidus
hereditary hypothalamic, animal model of, 633
Dipyridamole
and thrombus deposition, 557

Elastase
synthesis by macrophages, 404
Electron microscopy
of atrial sarcoplasmic reticulum in mitral valve disease, 1
of contractile proteins in cancer cells, 457
of cyclodextrin nephrosis, 370
of intracranial neoplasms induced by avian sarcoma virus, 149
of intranuclear filaments in MS and optic neuritis patients, 245
of lamellated inclusion bodies in lung tumors, 319
of pancreatic neoplasms in hamsters, 517
of platelet abnormalities, 589
of pulmonary mineral dust, 427
of virus-like particles in placentas, 383
Embryo-derived teratomas
and astrocytic differentiation, 197
studies in mice, 241
Endocytosis
lysosomes and vesicles in, 45
Endometrium
tubuloreticular structures in endothelial cells in SLE, 386, 387–388
Endoplasmic reticulum
cisterns in tissues or cells, 18, 19
Enzymes
release in phagocytosis, 400
Epidermis
regeneration after abrasion, 329
Erythrocytes
rosette formation on canine sarcoma cells, 359

Ferritin
and cytoplasmic fibrillar bodies in kidneys, 135
Ferruginous bodies
pulmonary, 432
Fibrillar bodies
cytoplasmic, in kidneys, lead-induced, 135
Filaments
intranuclear, in lymphocytes of MS and optic neuritis patients, 245

Gangliosidosis, G_{M2} type, animal model of, 419
Gingiva
experimental lesions of, 637
Glycogen bodies
in tissues or cells, 18, 19
Glycoproteins
as amyloid precursors, 304
Gray platelet syndrome, 597

Heart
atrial sarcoplasmic reticulum in mitral valve disease, 1
HeLa cells
amino acid deprivation in, autophagocytosis from, 485
Hermansky-Pudlak syndrome, 593
Hypothalamus
and hereditary diabetes insipidus, animal model of, 633

Immunofluorescence studies
of antiintestinal antibody, 269
of contractile proteins in cancer cells, 457
of neuroepithelial differentiation from embryoid bodies of teratomas, 197
Immunology
antibodies to renal tubular basement and experimental nephritis, 531
nonpathogenicity of antiintestinal antibody, 269
phagocyte role in immunity, 397
Inclusions
crystalline, in placental cells in SLE, 386, 387
lamellated bodies in lung tumors, 319
Interferon
synthesis by macrophages, 409

Intestinal antigen
antibody to, nonpathogenicity of, 269
Iodine deficiency
and thyroid histology in animals, 69

Kidney
antibodies to tubular basement membrane, 228
and experimental nephritis, 531
cyclodextrin nephrosis, 367
cytoplasmic fibrillar bodies in, lead-induced, 135
interstitial nephritis, 214
macrothrombocytopathic nephritis, hereditary, 605
papillary necrosis of, 226
pyelonephritis, chronic, 218

Lamellated bodies
in lung tumors, 319
Larynx
cancer cells of, contractile proteins in, 460
Lead
and cytoplasmic fibrillar bodies in kidneys, 135
Lipid
in aortic muscle lysosomes, 39
Lipodystrophy
cerebrospinal, porcine, 419
Lungs
cultured alveolar macrophages, 123
lamellated inclusion bodies in tumors, 319
mineral dust in, 427
Lupus erythematosus
and virus-like particles in placentas, 383
Lymphocytes
interactions with macrophages, 398, 405
intranuclear filaments in, in MS and optic neuritis patients, 245
tonsillar, 341
Lysosomes
of aortic muscle cells, lipid in, 39
and endocytosis, 45
enzyme release in phagocytosis, 400
Lysozyme
secretion by phagocytes, 402
Lytic factors
secretion by phagocytes, 407

Macrophages
alveolar, cultured, 123
interactions with lymphocytes, 398, 405
secretory function of mononuclear phagocytes, 396
turnover in chronic inflammation, 255
May-Hegglin anomaly, 600
Membranes
of platelet dense tubular system, 283
Micas
pulmonary deposits of, 430, 433
Mineral dust
pulmonary, 427
Mitral valve disease
atrial sarcoplasmic reticulum in, 1
Mononuclear cells
intranuclear filaments in, in MS and optic neuritis patients, 245
phagocytic, secretory function of, 396
turnover in chronic inflammation, 255
Muscle cells
aortic, lipid in lysosomes of, 39
atrial, in mitral valve disease, 1
damage from alcohol consumption, 499
sarcoplasmic reticulum cisterns in, 15, 16
vascular, endocytosis by, 45
Myocardium
sarcoplasmic reticulum in mitral valve disease, 1

Necrosis
renal papillary, 226
Neoplasia
contractile protein in cancer cells, 457
experimental teratoma, 241
intracranial, induced by avian sarcoma virus, 149
lamellated inclusion bodies in lung tumors, 319
neuroepithelial differentiation from embryoid bodies of teratomas, 197
pancreatic, induced in hamsters, 507
parathyroid adenomas in normocalcemic hyperparathyroidism, 475
pheochromocytoma with thyroid carcinoma, 177
pituitary tumors in rats, 423
thyroid tumors in animals, 61
tumor cells forming rosettes with erythrocytes, 259
Nephritis
antitubular basement membrane, experimental, 531
interstitial, 214
acute, 215
chronic, 217
macrothrombocytopathic, hereditary, 605
Nephrosis
from cyclodextrin, 367
Neuritis
optic, and intranuclear filaments in lymphocytes, 245

Neuroepithelial cells
differentiation from ascitic embryoid bodies, 197

Optic neuritis
and intranuclear filaments in lymphocytes, 245
Oral cavity
cancer cells of, contractile proteins in, 460
experimental periodontitis, 637

Pancreas
neoplasms induced in hamsters, 517
Parathyroid gland
adenomas in normocalcemic hyperparathyroidism, 475
hyperplasia with pheochromocytoma and thyroid carcinoma, 177
Periodontitis
chronic destructive, animal model of, 637
Peroxidase
platelet, 286
Phagocyte secretions, 396
collagenase, 404
colony-stimulating factor, 407
complement proteins, 409
elastase, 404
interferon, 409
lysosomal enzymes, 400
lysozyme, 402
lytic factors, 407
plasminogen activator, 403
pyrogen, 409
Pheochromocytoma
with thyroid carcinoma, 177
Pituitary gland
activity in experimental diabetes insipidus, 633
tumors in rats, 423
Placentas
virus-like particles in, in SLE patients, 383
Plasminogen activator
secretion by phagocytes, 403
Platelets
abnormal, ultrastructure of, 589
adhesion and aggregation of, 606
in Bernard-Soulier syndrome, 604
in Chediak-Higashi syndrome, 599
contractile mechanism defects in, 607
defective release reaction in, 601
dense tubular system of, 283, 601
electron-dense bodies in, 593
granules in, 597
in gray platelet syndrome, 597
in Hermansky-Pudlak syndrome, 593
in macrothrombocytopathic nephritis, hereditary, 605
May-Hegglin anomaly of, 600
organelles in, 592
peripheral zone of, 602
prostaglandin production in, 283
secretion defects in, 607
sol–gel zone of, 602
storage pool disease of, 595
in thrombasthenia, 603
Pneumoconiosis
pulmonary mineral deposits in, 427
Pregnancy
experimental parturient hypocalcemia in cows, 569
virus-like particles in placentas in SLE, 383
Prostaglandins
platelet production of, 283
Proteins
complement, synthesis by phagocytes, 409
contractile, in cancer cells, 457
kinetics in plasma, amyloid induction affecting, 299
Pyelonephritis
chronic, 218
Pyorrhea
animal model of, 637
Pyrogen
secretion by macrophages, 409

Quartz
pulmonary deposits of, 430

Regeneration
epidermal, after abrasion, 329
Rosette formation
by canine sarcoma cells, 359

Sarcoma cells
canine, rosette formation by, 359
Sarcoma virus
avian, inducing intracranial neoplasms, 149
Sarcoplasmic reticulum
atrial, in mitral valve disease, 1
Sclerosis, multiple
and intranuclear filaments in lymphocytes, 245
Silicosis
pulmonary mineral deposits in, 430
Sipple's syndrome, 177
Skin
cancer cells of, contractile proteins in, 458
epidermal regeneration after abrasion, 329

Sulfinpyrazone
and thrombus deposition, 557

Talc
pulmonary deposits of, 432
Teratoma
embryo-derived
astrocytic differentiation from, 197
studies in mice, 241
Testicular teratoma
embryo-derived
astrocytic differentiation from, 197
studies in mice, 241
Thrombasthenia, 603
Thrombosis
antithrombotic agents in animal vascular shunt model, 557
Thromboxane A_2
as ionophore, 283
Thyroid tumors
in animals, 61
adenoma, 72, 83
canine cases, 64
carcinoma, 71, 73, 83
ectopic, 79
feline cases, 81
medullary carcinoma, 237
with pheochromocytoma, 177
Tonsillar lymphocytes
human, 341
Tuberculosis
macrophage turnover in, 255
Tubuloreticular structures
in endometrial endothelial cells in SLE, 386, 387–388
Tumors (*see* neoplasia)

Uterus
tubuloreticular structures in endometrial endothelial cells in SLE, 386, 387–388

Vasculature
antithrombotic agents in animal shunt model, 557
endocytosis by smooth muscle cells, 45
lipid in muscle lysosomes of aorta, 39
Vasopressin
production in experimental diabetes insipidus, 633
Vesicles
and endocytosis, 45
Virus
intracranial neoplasms induced by avian sarcoma virus, 149
Virus-like particles
placental, in SLE patients, 383

Index of Authors

Volume 83, 1976

Abbey H: *See* Tsuda T, Dannenberg AM Jr, Ando M, Abbey H, Corrine AR..... 255
Adamany AM: *See* Coltoff-Schiller B, Goldfischer S, Adamany AM, Wolinsky H.. 45
Adamson IYR: *See* Bowden DH, Adamson IYR..... 123
Althoff J, Pour P, Malick L, Wilson RB: Pancreatic neoplasms induced in Syrian golden hamsters. I. Scanning electron microscopic observations (June)..... 517
Ando M: *See* Tsuda T, Dannenberg AM Jr, Ando M, Abbey H, Corrine AR..... 255
Andrews RB: *See* Yang T-J, Kennedy JR, Andrews RB..... 359
Argyris TS: Kinetics of epidermal production during epidermal regeneration following abrasion in mice (May)..... 329
Axelrad M: *See* Kisilevsky R, Axelrad M, Brunet S, Richards M..... 299

Bay WW: *See* Pierce KR, Kosanke SD, Bay WW, Bridges CB..... 419
Berry JP, Henoc P, Galle P, Pariente R: Pulmonary mineral dust: A study of ninety patients by electron microscopy, electron microanalysis, and electron microdiffraction (June)..... 427
Bhan AK: *See* Van Zwieten MJ, Bhan AK, McCluskey RT, Collins AB..... 531
Bignami A: *See* VandenBerg SR, Ludwin SK, Herman MM, Bignami A..... 197
Bigner DD: *See* Copeland DD, Talley FA, Bigner DD..... 149
Black HE: *See* Yarrington JT, Capen CC, Black HE, Re R, Potts JT Jr, Geho WB..... 569
Boorman GA, Hollander CF: Animal Model of Human Disease: Medullary carcinoma of the thyroid (April)..... 237
Bowden DH, Adamson IYR: The alveolar macrophage delivery system: Kinetic studies in cultured explants of murine lung (April)..... 123
Bradford WD: *See* Mitchener JS, Shelburne JD, Bradford WD, Hawkins HK..... 485
Bridges CB: *See* Pierce KR, Kosanke SD, Bay WW, Bridges CB..... 419
Brunet S: *See* Kisilevsky R, Axelrad M, Brunet S, Richards M..... 299

Capen CC: *See* Yarrington JT, Capen CC, Black HE, Re R, Potts JT Jr, Geho WB.... 569
Collins AB: *See* Van Zwieten MJ, Bhan AK, McCluskey RT, Collins AB..... 531
Coltoff-Schiller B, Goldfischer S, Adamany AM, Wolinsky H: Endocytosis by vascular smooth muscle cells *in vitro* and *in vivo*: Roles of vesicles and lysosomes (April)..... 45
Coltoff-Schiller B, Goldfischer S, Wolinsky H, Factor SM: Lipid accumulation in human aortic smooth muscle cell lysosomes (April)..... 39
Copeland DD, Talley FA, Bigner DD: The fine structure of intracranial neoplasms induced by the inoculation of avian sarcoma virus in neonatal and adult rats (April)..... 149
Corrine AR: *See* Tsuda T, Dannenberg AM Jr, Ando M, Abbey H, Corrine AR. 255
Csank-Brassert J: *See* Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ..... 457

Damjanov I, Solter D: Animal Model of Human Disease: Teratoma and teratocarcinoma (April)..... 241
Dannenberg AM Jr: *See* Tsuda T, Dannenberg AM Jr, Ando M, Abbey H, Corrine AR..... 255
DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S: Adrenal medullary hyperplasia: A morphometric analysis in patients with familial medullary thyroid carcinoma (April)..... 177
Der Kinderen PJ: *See* Leav I, Schiller AL, Rijnberk A, Legg M, Der Kinderen PJ..... 61

Ejerblad S: *See* Grimelius L, Ejerblad S, Johansson H, Werner I..... 475

Factor SM: *See* Coltoff-Schiller B, Goldfischer S, Wolinsky H, Factor SM..... 39
Feldman ZT: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S..... 177

Ferrans VJ: *See* Thiedemann K, Ferrand VJ 1
Frank DW, Gray JE, Weaver RN: Cyclodextrin nephrosis in the rat (May) 367

Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ: Contractile proteins in human cancer cells: Immunofluorescent and electron microscopic study (June) 457
Gagel RF: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S 177
Galle P: *See* Berry JP, Henoc P, Galle P 427
Gang DL: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S 177
Geho WB: *See* Yarrington JT, Capern CC, Black HE, Re R, Potts J Jr, Geho WB 569
Gerrard JM, White JG, Rao GHR, Townsend D: Localization of platelet prostaglandin production in the platelet dense tubular system (May) 383
Gerrard JM: *See* White JG, Gerrard JM 589
Goldfischer S: *See* Coltoff-Schiller B, Goldfischer S, Adamany AM, Wolinsky H ... 45
Goldfischer S: *See* Coltoff-Schiller B, Goldfischer S, Wolinsky H, Factor SM 39
Gray JE: *See* Frank DW, Gray JE, Weaver RN 367
Grimelius L, Ejerblad S, Johansson H, Werner I: Parathyroid adenomas and glands in normocalcemic hyperparathyroidism: A light microscopic study (June) 475

Hawkins HK: *See* Mitchener JS, Shelburne JD, Bradford WD, Hawkins HK 485
Henoc P: *See* Berry JP, Henoc P, Galle P 427
Heptinstall RH: Review Article: Interstitial nephritis (April) 213
Herman MM: *See* VandenBerg SR, Ludwin SK, Herman MM, Bignami A 197
Holborow EJ: *See* Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ 457
Hollander CF: *See* Boorman GA, Hollander CF 237

Imamura M, Phillips PE, Mellors RC: The occurrence and frequency of type C virus–like particles in placentas from patients with systemic lupus erythematosus and from normal subjects (May) 383
Ito A: Animal Model of Human Disease: Pituitary tumors (May) 423

Johansson H: *See* Grimelius L, Ejerblad S, Johansson H, Werner I 475

Kapanci Y: *See* Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ 457
Katz AM: *See* Rubin E, Katz AM, Lieber CS, Stein EP, Puszkin S 499
Kennedy JR: *See* Yang T-JR, Kennedy JR, Andrews RB 359
Kisilevsky R, Axelrad M, Brunet S, Richards M: Effects of amyloid induction on plasma protein turnover, and its implication (May) 299
Koprowski H: *See* Tanaka R, Santoli D, Koprowski H 245
Kosanke SD: *See* Pierce KR, Kosnake SD, Bay WE, Bridges CB 419
Leav I, Schiller AL, Rijnberk A, Legg M, der Kinderen PJ: Adenomas and carcinomas of the canine and feline thyroid (April) 61
Legg M: *See* Leav I, Schiller AL, Rijnberk A, Legg M, der Kinderen PJ 61
Levy BM: Animal Model of Human Disease: Chronic destructive peridontitis (periodontal disease, pyorrhea alveolaris, pyorrhea) (June) 637
Lieber CS: *See* Rubin E, Katz AM, Lieber CS, Stein EP, Puszkin S 499
Ludwin SK: *See* VandenBerg SR, Ludwin SK, Herman MM, Bignami A 197

Malick L: *See* Althoff J, Pour P, Malick L, Wilson RB 517
Mason RG, Wolf RH, Zucker WH, Shinoda BA, Mohammad SF: Effects of antithrombotic agents evaluated in a nonhuman primate vascular shunt model (June) 557
McCluskey RT: *See* Van Zwieten MJ, Bhan AK, McCluskey RT, Collins AB 531
Mellors RC: *See* Imamura M, Phillips PE, Mellors RC 383

Miller HH: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S..... 177
Mitchener JS, Shelburne JD, Bradford WD, Hawkins HK: Cellular autophagocytosis induced by deprivation of serum and amino acids in HeLa cells (June)..... 485
Mohammad SF: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, Mohammad SF..... 557
Mohr U: *See* Reznik-Schüller H, Mohr U..... 319

Pariente R: See Berry JP, Henoc P, Galle, P, Pariente R..... 427
Phillips PE: *See* Imamura M, Phillips PE, Mellors RC..... 383
Pierce KR, Kosanke SD, Bay WW, Bridges CB: Animal Model of Human Disease: Gangliosidosis (May)..... 419
Pitts AM: *See* Willson JKV Jr, Zaremba JL, Pitts AM, Pretlow TG II..... 341
Potts JT Jr: *See* Yarrington JT, Capen CC, Black HE, Re R, Potts JT Jr, Geho WB.... 569
Pour P: *See* Althoff J, Pour P, Malick L, Wilson RB..... 517
Pretlow TG II: *See* Willson JKV Jr, Zaremba JL, Pitts AM, Pretlow TG II..... 341
Purnell DM: Enhancement of tissue invasion in murine aspergillosis by systemic administration of suspensions of killed *Corynebacterium parvum* (June)..... 547
Puszkin S: *See* Rubin E, Katz AM, Lieber CS, Stein EP, Puszkin S..... 499

Rabin BS, Rogers SJ: Nonpathogenicity of antiintestinal antibody in the rabbit (May)..... 269
Rao GHR: *See* Gerrard JM, White JG, Rao GHR, Townsend D..... 383
Re R: *See* Yarrington JT, Capen CC, Black HE, Re R, Potts JT Jr, Geho WB..... 569
Reichlin S: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S..... 177
Reznik-Schüller H, Mohr U: Ultrastructure and formation of lamellated inclusion bodies in induced lung tumors of the European hamster (May)..... 319
Richards M: *See* Kisilevsky R, Axelrad M, Brunet S, Richards M..... 299
Richter GW: Evolution of cytoplasmic fibrillar bodies induced by lead in rat and mouse kidneys: Relation to clusters of ferritin (April)..... 135
Rijnberk A: *See* Leav I, Schiller AL, Rijnberk A, Legg M, der Kinderen PJ..... 61
Rogers SJ: *See* Rabin BS, Rogers SJ..... 269
Rubin E, Katz AM, Lieber CS, Stein EP, Puszkin S: Muscle damage produced by chronic alcohol consumption (June)..... 499

Santoli D: *See* Tanaka R, Santoli D, Koprowski H..... 245
Schiller AL: *See* Leav I, Schiller AL, Rijnberk A, Legg M, der Kinderen PJ..... 61
Schneeberger J-C: *See* Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ..... 457
Shelburne JD: *See* Mitchener JS, Shelburne JD, Bradford WD, Hawkins HK..... 485
Shinoda BA: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, Mohammad SF 557
Solter D: *See* Damjamov I, Solter D..... 241
Stein EP: *See* Rubin E, Katz AM, Lieber CS, Stein EP, Puszkin S..... 499

Talley FA: *See* Copeland DD, Talley FA, Bigner DD..... 149
Tanaka R, Santoli D, Koprowski H: Unusual intranuclear filaments in the circulating lymphocytes of patients with multiple sclerosis and optic neuritis (May)..... 245
Thiedemann K, Ferrans VJ: Ultrastructure of sarcoplasmic reticulum in atrial myocardium of patients with mitral valvular disease (April)..... 1
Townsend D: *See* Gerrard JM, White JG, Rao GHR, Townsend D..... 383
Trenchev P: *See* Gabbiani G, Csank-Brassert J, Schneeberger J-C, Kapanci Y, Trenchev P, Holborow EJ..... 457
Tsuda T, Dannenberg AM Jr, Ando M, Abbey H, Corrine AR: Mononuclear cell turnover in chronic inflammation: Studies on tritiated thymidine–labeled cells in blood, tuberculin traps, and dermal BCG lesions of rabbits (May)..... 255

Unanue ER: Review Article: Secretory function of mononuclear phagocytes (May).. 395

Valtin H: Animal Model of Human Disease: Hereditary hypothalamic diabetes insipidus (June)..... 623

VandenBerg SR, Ludwin SK, Herman MM, Bignami A: *In vitro* astrocytic differentiation from embryoid bodies of an experimental mouse testicular teratoma (April) 197
Van Zwieten MJ, Bhan AK, McCluskey RT, Collins AB: Studies on the pathogenesis of experimental anti-tubular basement membrane nephritis in the guinea pig (June) 531

Weaver RN: *See* Frank DW, Gray JE, Weaver RN 367
Werner I: *See* Grimelius L, Ejerblad S, Johansson H, Werner I 475
White JG, Gerrard JM: Review Article: Ultrastructural features of abnormal blood platelets (June) 589
White JG: *See* Gerrard JM, White JG, Rao GHR, Townsend D 383
Willson JKV Jr, Zaremba JL, Pitts AM, Pretlow TG II: A characterization of human tonsillar lymphocytes after separation from other tonsillar cells in an isokinetic gradient of Ficoll in tissue culture medium (May) 341
Wilson RB: *See* Althoff J, Pour P, Malick L, Wilson RB 517
Wolf RH: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, Mohammad SF 557
Wolfe HJ: *See* DeLellis RA, Wolfe HJ, Gagel RF, Feldman ZT, Miller HH, Gang DL, Reichlin S 177
Wolinsky H: *See* Coltoff-Schiller B, Goldfischer S, Adamany AM, Wolinsky H 45
Wolinsky H: *See* Coltoff-Schiller B, Goldfischer S, Wolinsky H, Factor SM 39

Yang T-J, Kennedy JR, Andrews RB: Rosette formation of human erythrocytes on canine transmissible venereal sarcoma cells (May) 359
Yarrington JT, Capen CC, Black HE, Re R, Potts JT Jr, Geho WB: Experimental parturient hypocalcemia in cows following prepartal chemical inhibition of bone resorption (June) 569

Zaremba JL: *See* Willson JKV Jr, Zaremba JL, Pitts AM, Pretlow TG II 341
Zucker WH: *See* Mason RG, Wolf RH, Zucker WH, Shinoda BA, Mohammad SF 557

The American Journal of PATHOLOGY

OFFICIAL PUBLICATION OF
THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS
THE AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY

Volume 83, 1976

(April through June)

BOARD OF EDITORS
Thomas D. Kinney, Editor-in-Chief
Donald B. Hackel, Associate Editor

Orville T. Bailey
Carl G. Becker
Frederick F. Becker
Baruj Benacerraf
Kurt Benirschke
Colin Bloor
Joel G. Brunson
John R. Carter
Charles G. Cochrane
John M. Craig
Frank J. Dixon, Jr.
John T. Ellis
Emmanuel Farber
Frank W. Fitch
Patrick J. Fitzgerald
David G. Freiman
Jack C. Geer
Thomas J. Gill III
Gabriel Godman
John B. Hazard
T. Carl Jones
Paul Kotin
Averill A. Liebow
Guido Majno
Reginald G. Mason
Donald G. McKay
Councilman Morgan
Richard L. Naeye
Henry C. Pitot
Alan S. Rabson
Goetz W. Richter
David T. Rowlands, Jr.
Edward A. Smuckler
Leon Sokoloff
Benjamin H. Spargo
Lewis Thomas
Jacinto J. Vazquez
F. Stephen Vogel
Peter A. Ward

Editorial Assistant: Virginia Hotelling

THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

COPYRIGHT © 1976

BY THE AMERICAN ASSOCIATION

OF PATHOLOGISTS AND BACTERIOLOGISTS

The American Journal of PATHOLOGY

CONTENTS FOR VOLUME 83, 1976

April

1 Ultrastructure of Sarcoplasmic Reticulum in Atrial Myocardium of Patients With Mitral Valvular Disease
Klaus-Ulrich Thiedemann and Victor J. Ferrans

39 Lipid Accumulation in Human Aortic Smooth Muscle Cell Lysosomes
Bernice Coltoff-Schiller, Sidney Goldfischer, Harvey Wolinsky, and Stephen M. Factor

45 Endocytosis by Vascular Smooth Muscle Cells *In Vivo* and *In Vitro*: Roles of Vesicles and Lysosomes
Bernice Coltoff-Schiller, Sidney Goldfischer, Anthony M. Adamany, and Harvey Wolinsky

61 Adenomas and Carcinomas of the Canine and Feline Thyroid
I. Leav, A. L. Schiller, A. Rijnberk, M. A. Legg, and P. J. der Kinderen

123 The Alveolar Macrophage Delivery System: Kinetic Studies in Cultured Explants of Murine Lung
Drummond H. Bowden and Ian Y. R. Adamson

135 Evolution of Cytoplasmic Fibrillar Bodies Induced by Lead in Rat and Mouse Kidneys: Relation to Clusters of Ferritin
G. W. Richter

149 The Fine Structure of Intracranial Neoplasms Induced by the Inoculation of Avian Sarcoma Virus in Neonatal and Adult Rats
Dana D. Copeland, Fred A. Talley, and Darell D. Bigner

177 Adrenal Medullary Hyperplasia: A Morphometric Analysis in Patients With Familial Medullary Thyroid Carcinoma
Ronald A. DeLellis, Hubert J. Wolfe, Robert F. Gagel, Zoila T. Feldman, Harry H. Miller, David L. Gang, and Seymour Reichlin

197 *In Vitro* Astrocytic Differentiation From Embryoid Bodies of an Experimental Mouse Testicular Teratoma
S. R. VandenBerg, S. K. Ludwin, M. M. Herman, and A. Bignami

213 REVIEW ARTICLE: Interstitial Nephritis
Robert H. Heptinstall

237 **Animal Model of Human Disease:** Medullary Carcinoma of the Thyroid
G. A. Boorman and C. F. Hollander

241 **Animal Model of Human Disease:** Teratoma and Teratocarcinoma
I. Damjanov and D. Solter

May

245 Unusual Intranuclear Filaments in the Circulating Lymphocytes of Patients With Multiple Sclerosis and Optic Neuritis
Ryuichi Tanaka, Daniela Santoli, and Hilary Koprowski

255 Mononuclear Cell Turnover in Chronic Inflammation: Studies on Tritiated Thymidine-Labeled Cells in Blood, Tuberculin Traps, and Dermal BCG Lesions of Rabbits
Tomiyasu Tsuda, Arthur M. Dannenberg, Jr., Masayuki Ando, Helen Abbey, and Adeline R. Corrine

269 Nonpathogenicity of Antiintestinal Antibody in the Rabbit
Bruce S. Rabin and Susan J. Rogers

283 Localization of Platelet Prostaglandin Production in the Platelet Dense Tubular System
Jonathan M. Gerrard, James G. White, Gundu H. R. Rao, and DeWayne Townsend

299 Effects of Amyloid Induction on Plasma Protein Turnover, and Its Implication
Robert Kisilevsky, Michael Axelrad, Susan Brunet, and Michael Richards

319 Ultrastructure and Formation of Lamellated Inclusion Bodies in Induced Lung Tumors of the European Hamster
H. Reznik-Schüller and U. Mohr

329 Kinetics of Epidermal Production During Epidermal Regeneration Following Abrasion in Mice
Thomas S. Argyris

341 A Characterization of Human Tonsillar Lymphocytes After Separation From Other Tonsillar Cells in an Isokinetic Gradient of Ficoll in Tissue Culture Medium
James K. V. Willson, Jr., Jack L. Zaremba, Annette M. Pitts, and Thomas G. Pretlow II

359 Rosette Formation of Human Erythrocytes on Canine Transmissible Venereal Sarcoma Cells
Tsu-Ju Yang, John R. Kennedy, and Richard B. Andrews

367 Cyclodextrin Nephrosis in the Rat
D. W. Frank, J. E. Gray, and R. N. Weaver

383 The Occurrence and Frequency of Type C Virus-Like Particles in Placentas From Patients With Systemic Lupus Erythematosus and From Normal Subjects
Masakatsu Imamura, Paul E. Phillips, and Robert C. Mellors

395 REVIEW ARTICLE: Secretory Function of Mononuclear Phagocytes
Emil R. Unanue

419 **Animal Model of Human Disease:** G_{M2} Gangliosidosis
K. R. Pierce, S. D. Kosanke, W. W. Bay, and C. H. Bridges

423 **Animal Model of Human Disease:** Pituitary Tumors
Akihiro Ito

June

427 Pulmonary Mineral Dust: A Study of Ninety Patients by Electron Microscopy, Electron Microanalysis, and Electron Microdiffraction
J. P. Berry, P. Henoc, P. Galle, R. Pariente

457 Contractile Proteins in Human Cancer Cells: Immunofluorescent and Electron Microscopic Study
Giulio Gabbiani, Janet Csank-Brassert, Jean-Claude Schneeberger, Yusuf Kapanci, Preslav Trenchev, and E. John Holborow

475 Parathyroid Adenomas and Glands in Normocalcemic Hyperparathyroidism: A Light Microscopic Study
L. Grimelius, S. Ejerblad, H. Johansson, and I. Werner

485 Cellular Autophagocytosis Induced by Deprivation of Serum and Amino Acids in HeLa Cells
James S. Mitchener, John D. Shelburne, William D. Bradford, and Hal K. Hawkins

499 Muscle Damage Produced by Chronic Alcohol Consumption
Emanuel Rubin, Arnold M. Katz, Charles S. Lieber, Elliott P. Stein, and Saul Puszkin

517 Pancreatic Neoplasms Induced in Syrian Golden Hamsters. I. Scanning Electron Microscopic Observations
Jürgen Althoff, Parviz Pour, Linda Malick, and Richard B. Wilson

531 Studies on the Pathogenesis of Experimental Anti-Tubular Basement Membrane Nephritis in the Guinea Pig
M. J. Van Zwieten, A. K. Bhan, R. T. McCluskey, and A. B. Collins

547 Enhancement of Tissue Invasion in Murine Aspergillosis by Systemic Administration of Suspensions of Killed *Corynebacterium parvum*
Dallas M. Purnell

557 Effects of Antithrombotic Agents Evaluated in a Nonhuman Primate Vascular Shunt Model
R. G. Mason, R. H. Wolf, W. H. Zucker, B. A. Shinoda, and S. F. Mohammad

569 Experimental Parturient Hypocalcemia in Cows Following Prepartal Chemical Inhibition of Bone Resorption
John T. Yarrington, Charles C. Capen, Hugh E. Black, Richard Re, John T. Potts, Jr., and Walter B. Geho

589 REVIEW ARTICLE: Ultrastructural Features of Abnormal Blood Platelets
James G. White and Jonathan M. Gerrard

633 Animal Model of Human Disease: Hereditary Hypothalamic Diabetes Insipidus
Heinz Valtin

637 Animal Model of Human Disease: Chronic Destructive Periodontitis (Periodontal Disease, Pyorrhea Alveolaris, Pyorrhea)
Barnet M. Levy

---

641 Index of Subjects, Volume 83
647 Index of Authors, Volume 83

INDEX

SUBJECT
AUTHOR
CONTENTS FOR VOLUME 84

Index of Subjects

Volume 84, 1976

Adenoacanthoma
endometrial, 25
Adenosis
vaginal, animal model of, 669
Adrenal cortex
in spontaneously hypertensive rats, 545
Age
and ceroid-like pigment accumulation in Chediak-Higashi syndrome, 225
American Association of Pathologists and Bacteriologists, 425
Amyloidosis
renal, streptozotocin affecting, 139
Angiotensin
hypertension from, affecting coronary arteries and myocardium, 111
Animal Models of Human Disease
adenosis and clear-cell carcinoma of vagina and cervix, 669
α-antitrypsin deficiency, 427
bladder cancer in schistosomiasis, 673
hyperthermia, malignant, 197
malignant tumors, 193
ulcerative colitis, 431
α-Antitrypsin deficiency
animal model of, 427
Aspirin
and inhibition of platelet aggregation, 11
Atherosclerosis
diet in pathogenesis of, 615

Bladder
carcinoma in schistosomiasis, animal model of, 673
Bone cells
glucocorticoid and vitamin D interaction in, 457
Breast cancer
identification of B and T lymphocytes in, 529

Cadmium aerosol
lung injury from, 561
Carcinoma
bladder, in schistosomiasis, animal model of, 673
cervical, animal model of, 669
pancreatic, *in vitro* model of, 469
Ceroid-like pigment
accumulation in Chediak-Higashi syndrome, 225
Chediak-Higashi syndrome
ceroid-like pigment accumulation in, 225
Coagulation
intravascular, activation by endotoxin, leukocyte and platelet transfusion affecting, 239
Colitis
ulcerative, animal model of, 431
Collecting tubules
in potassium depletion, 317
Colon
neoplasia from 1,2-DMH, 69
Complement deposition
in end-stage kidney, 149
in membranoproliferative glomerulonephritis, 283
Coronary arteries
in angiotensin-induced hypertension, 111
Cyanide
effects in perfused rat hearts, 327

Diet (*see* nutrition)
1,2-Dimethylhydrazine dihydrochloride (1,2-DMH)
intestinal tumors from, 69
Dystrophy
chicken, 299

Electron microscopy
of intestinal tumors from 1,2-DMH, 69
Embolism
fat, lipemia and trauma affecting, 515
Encephalitis
Venezuelan equine, pathogenesis of, 351
Endometrium
adenoacanthoma of, 25
Endotoxin
and intravascular coagulation activation, leukocyte and platelet transfusion affecting, 239
Enzymes
oxygen-induced release after myocardial injury, 327
Eosinophils
and inflammatory response to schistosomula in immune mice, 479
Ethionine
pancreatotoxicity of, dietary factors in, 633

Fat
embolism of, lipemia and trauma affecting, 515
intracellular, and identification of parathyroid glands, 521
Fibroblasts
proliferation *in vitro*, macrophage role in, 501

Gel-filtration
of platelets, 11
Genetics
and immune response to synthetic polypeptide in thymectomized rats, 55
Glomerulonephritis
membranoproliferative, 283
Glucocorticoids
interaction with vitamin D in bone cells, 457
Granulocytopenia
and intravascular coagulation activation by endotoxin, transfusions affecting, 239
Granulomatous response
inflammatory, 163

Heart
in angiotensin-induced hypertension, 111
oxygen-induced enzyme release after myocardial injury, 327
Hemorrhagic fever
Bolivian, chronic, in rhesus monkey, 211
Hypertension
angiotensin-induced, coronary effects of, 111
spontaneous, in rats, adrenal cortex in, 545
Hyperthermia
malignant, animal model of, 197

Immune complex
receptors on cell surfaces, 437
Immune response
to synthetic polypeptide, genetic control of, 55
Immunity
cell-mediated, in uremia, and suppressor cell activity, 1
Immunization
with intestinal antigens, pathology from, 201
Immunodeficiency
in horses, lymphoid tissue in, 39
Immunoglobulin
deposition in end-stage kidney, 149
Immunohistochemistry
and identification of B and T lymphocytes in breast cancer, 529
Immunology
and disease with nutritional deficiency, 599
and inflammatory response to schistosomula in immune mice, 479
Immunopathology
of end-stage kidney, 149
Intestines
Paneth cell degeneration from methylmercury hydroxide ingestion, 93
pathology from immunization with intestinal antigens, 210
tumors from 1,2-DMH, 69

Kidney
amyloidosis of, streptozotocin affecting, 139
cell-mediated immunity in uremia, and suppressor cell activity, 1
collecting tubules in potassium depletion, 317
end-stage, immunopathology of, 149
membranoproliferative glomerulonephritis, 283
pathology from immunization with intestinal antigens, 201
water deprivation affecting medulla, 87

Leukocytes, transfused
and intravascular coagulation activation by endotoxin, 239
and lymph node repopulation after whole-body radiation, 259
Lipemia
and fat embolism, 515
Liver
pathology from immunization with intestinal antigens, 201
protein metabolism in, nutritional disorders of, 649
Lungs
cadmium aerosol affecting, 561
Lymph nodes
repopulation after whole-body radiation and leukocyte transfusions, 259
Lymphocytes
identification of B and T cells in breast cancer, 529
Lymphoid tissue
in immunodeficiency in horses, 39
Lymphoreticular system
in Venezuelan equine encephalitis, 351
Lymphotoxin
review article, 579

Macrophages
and fibroblast proliferation *in vitro*, 501
Malignancies (*see* neoplasia)
Methylmercury hydroxide
Paneth cell degeneration from, 93
Myeloid pathogenesis
in Venezuelan equine encephalitis, 351
Myocardium
in angiotensin-induced hypertension, 111
oxygen-induced enzyme release after injury to, 327

Neoplasia
animal model of malignant tumors, 193
bladder cancer in schistosomiasis, animal model of, 673
carcinoma of vagina and cervix, animal model of, 669
endometrial adenoacanthoma, 25
identification of B and T lymphocytes in breast cancer, 529
intestinal tumors from 1,2-DMH, 69
in vitro model of pancreatic carcinoma, 469
Nutrition
and atherosclerosis, 615
and disease pathogenesis, 598
and immunologic function in disease, 599
and pancreatotoxicity of ethionine, 633
and protein metabolism in liver, 649

Oxygen
and enzyme release after myocardial injury, 327

Pancreas
carcinoma of, *in vitro* model of, 469
ethionine affecting, dietary factors in, 633
Paneth cells
degeneration after methylmercury hydroxide ingestion, 93
Parathyroid glands
identification by intracellular fat, 521
Platelets
gel-filtered, 11
transfused, and intravascular coagulation activation by endotoxin, 239
Polypeptide
immune response to, genetic control of, 55
Potassium
depletion of, collecting tubules in, 317
Proteins
and inhibition of platelet aggregation by aspirin, 11
metabolism in liver, nutritional disorders of, 649

Radiation
whole-body, and lymph node repopulation after leukocyte transfusions, 259
Respiratory tract
cytopathology of, 371

Schistosomiasis
bladder carcinoma in, animal model of, 673
inflammatory response to schistosomula in immune mice, 479
Streptozotocin
and renal amyloidosis in hamsters, 139

Thrombocytopenia
and intravascular coagulation activation by endotoxin, transfusions affecting, 239
Thymectomy
and genetic control of immune response to synthetic polypeptide, 55
Thymus
in immunodeficiency in horses, 39
Thyroparathyroidectomy
and interaction of glucocorticoids and vitamin D in bone cells, 457
Transfusions, leukocyte
and intravascular coagulation activation by endotoxin, 239
and lymph node repopulation after whole-body radiation, 259
Trauma
and fat embolism, 515
Tumors (*see* neoplasia)

Uremia
cell-mediated immunity in, and suppressor cell activity, 1
Uterus
adenoacanthoma of endometrium, 25
carcinoma of cervix, animal model of, 669

Vagina
adenosis of, animal model of, 669
Vasculature
coronary arteries in angiotensin-induced hypertension, 111
Vitamin D
interaction with glucocorticoids in bone cells, 457

Water
deprivation affecting renal medulla, 87

Index of Authors

Volume 84, 1976

Adams DO: Review Article: The granulomatous inflammatory response (July) ... 163
Anderson IL: *See* Nelson TE, Jones EW, Anderson IL ... 197
Anver MR, Cohen BJ: Animal Model of Human Disease: Ulcerative colitis (August) ... 431
Anversa P: *See* Giacomelli F, Anversa P, Wiener J ... 111
Ashbrook PC: *See* Fine KM, Ashbrook PC, Brigden LP, Maldonado JE, Didisheim P ... 11

Banks KL: *See* McGuire TC, Banks KL, Davis WC ... 39
Berman L, Stilmant M, Hayes J: Streptozotocin and renal amyloidosis in the Syrian hamster (July) ... 139
Bōdy RL: *See* Mottet NK, Bōdy RL
Bohn E, Müller-Berghaus G: The effect of leukocyte and platelet transfusion on the activation of intravascular coagulation by endotoxin in granulocytopenic and thrombocytopenic rabbits (August) ... 239
Brigden LP: *See* Fine KM, Ashbrook PC, Brigden LP, Maldonado JE, Didisheim P ... 11
Brown RR: *See* Cheever AW, Kuntz RE, Moore JA, Bryan GT, Brown RR ... 673
Bruch C: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D ... 259
Brutel de la Rivière A: *See* Schoorl R, Brutel de la Rivière A, von dem Borne AEGKr, Feltkamp-Vroom TM ... 529
Bryan GT: *See* Cheever AW, Kuntz RE, Moore JA, Bryan GT, Brown RR ... 673

Calvo W: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D ... 259
Capen CC: *See* Weisbrode SE, Capen CC ... 457
Cavallo T: *See* Davis BK, Cavallo T ... 283
Cheever AW, Kuntz RE, Moore JA, Bryan GT, Brown RR: Animal Model of Human Disease: Carcinoma of the urinary bladder in *Schistosoma haematobium* infection (September) ... 673
Cohen BJ: *See* Anver MR, Cohen BJ ... 431
Cooper WC: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA ... 599

Davis BK, Cavallo T: Membranoproliferative glomerulonephritis: Localization of early components of complement in glomerular deposits (August) ... 283
Davis BK, Shonard JW, Gill TJ III: Genetic control of the immune response to poly(Glu^{52}Lys^{33}Tyr^{15}) in neonatally thymectomized high and low responder rats (July) ... 55
Davis WC: *See* McGuire TC, Banks KL, Davis WC ... 39
Didisheim P: *See* Fine KM, Ashbrook PC, Brigden LP, Maldonado JE, Didisheim P ... 11
Doughty BL: *See* von Lichtenberg F, Sher A, Gibbons N, Doughty BL ... 479

Eddy GA: *See* McLeod CG Jr, Stookey JL, Eddy GA, Scott SK ... 211

Feltkamp-Vroom TM: *See* Schoorl R, Brutel de la Rivière A, von dem Borne AEGKr, Feltkamp-Vroom TM ... 529
Fernandes G: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA ... 599
Fine KM, Ashbrook PC, Brigden LP, Maldonado JE, Didisheim P: Gel-filtered human platelets: Ultrastructure, function and role of proteins in inhibition of aggregation by aspirin (July) ... 11
Flad H-D: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D ... 259
Flemister M: *See* Walker DH, Harrison A, Murphy K, Flemister M, Murphy FA 351

Fliedner TM: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf, H-P, Flad H-D 259
Forsberg J-G: Animal Model of Human Disease: Adenosis and clear-cell carcinomas of vagina and cervix (September) 669
Frable WJ: *See* Johnston WW, Frable WJ 371

Gallagher MJ: *See* Roth SI, Gallagher MJ 521
Ganote CE, Worstell J, Kaltenbach JP: Oxygen-induced enzyme release after irreversible myocardial injury: Effects of cyanide in perfused rat hearts (August). 327
Garvin AJ: *See* McKeever PE, Garvin AJ, Hardin DH, Spicer SS 437
Giacomelli F, Anversa P, Wiener J: Effect of angiotensin-induced hypertension on rat coronary arteries and myocardium (July) 111
Gibbons N: *See* von Lichtenberg F, Sher A, Gibbons N, Doughty BL 479
Gill TJ III: *See* Davis BK, Shonnard JW, Gill TJ III 55
Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA: Symposium: Nutritional deficiency, immunologic function, and disease (September) 599
Gould VE, Sommers SC, Terzakis JA: Squamous differentiation and basal lamina deposition in endometrial adenoacanthoma (July) 25

Hansen MA: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA 599
Hardin DH: *See* McKeever PE, Garvin AJ, Hardin DH, Spicer SS 437
Harrison A: *See* Walker DH, Harrison A, Murphy K, Flemister M, Murphy FA 351
Hausberger FX: Effects of lipemia and trauma on experimental fat embolism (September) 515
Hayes J: *See* Berman L, Stilmant M, Hayes J 139
Herbst E: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D 259

Johnston WW, Frable WJ: Review Article: The cytopathology of the respiratory tract (August) 371
Jones EW: *See* Nelson TE, Jones EW, Anderson IL 197
Jose DC: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA 599

Kaltenbach JP: *See* Ganote CE, Worstell J, Kaltenbach JP 327
Klopfer U: *See* Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA 427
Kramer TR: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA 599
Kritchevsky D: Symposium: Diet and atherosclerosis (September) 615
Kuntz RE: *See* Cheever AW, Kuntz RE, Moore JA, Bryan GT, Brown RR 673

Leibovich SJ, Ross R: A macrophage-dependent factor that stimulates the proliferation of fibroblasts *in vitro* (September) 501
Lombardi B: Symposium: Influence of dietary factors on the pancreatotoxicity of ethionine (September) 633

Maldonado JE: *See* Fine KM, Ashbrook PC, Brigden LP, Maldonado JE, Didisheim P 11
Malick L: *See* Toth B, Malick L, Shimizu H 69
Malouf NN, Sommer JR: Chicken dystrophy: The geometry of the transverse tubules (August) 299
Marsh WH: *See* Parsa I, Marsh WH 469
McGuire TC, Banks KL, Davis WC: Alterations of the thymus and other lymphoid tissue in young horses with combined immunodeficiency (July) 39
McKeever PE, Garvin AJ, Hardin DH, Spicer SS: Immune complex receptors on cell surfaces. II. Cytochemical evaluation of their abundance on different immune cells: Distribution, uptake, and regeneration (September) 437

McLeod CG Jr, Stooker JL, Eddy GA, Scott SK: Pathology of chronic Bolivian hemorrhagic fever in the rhesus monkey (August) 211
Meirom R: *See* Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA 427
Michael AF: *See* Velosa J, Miller K, Michael AF 149
Miller K: *See* Velosa J, Miller K, Michael AF 149
Moore JA: *See* Cheever AW, Kuntz RE, Moore JA, Bryan GT, Brown RR 673
Morrison AB: *See* Raskova J, Morrison AB 1
Mottet NK, Body RL: Primate Paneth cell degeneration following methylmercury hydroxide ingestion (July) 93
Müller-Berghaus G: *See* Bohn E, Müller-Berghaus G 239
Murphy FA: *See* Walker DH, Harrison A, Murphy K, Flemister M, Murphy FA 351
Murphy K: *See* Walker DH, Harrison A, Murphy K, Flemister M, Murphy FA 351

Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D: The repopulation of lymph nodes of dogs after 1200 R whole-body x-irradiation and intravenous administration of mononuclear blood leukocytes (August) 259
Nelson TE, Jones EW, Anderson IL: Animal Model of Human Disease: Malignant hyperthermia (July) 197
Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA: Animal Model of Human Disease: α-Antitrypsin deficiency (August) 427
Nickerson PA: The adrenal cortex in spontaneously hypertensive rats: A quantitative ultrastructural study (September) 545
Nobel TA: *See* Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA 427

Ordóñez NG, Spargo BH: The morphologic relationship of light and dark cells of the collecting tubule in potassium-depleted rats (August) 317

Palmer KC: *See* Strauss RH, Palmer KC, Hayes JA, ... 561
Parsa I, Marsh WH: An *in vitro* model of pancreatic carcinoma: Morphology and *in vivo* growth (September) 469

Rabin BS, Rogers S: Pathologic changes in the liver and kidney produced by immunization with intestinal antigens (August) 201
Raskova J, Morrison AB: A decrease in cell-mediated immunity in uremia associated with an increase in activity of suppressor cells (July) 1
Rattner D: *See* Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA 427
Rogers S: *See* Rabin BS, Rogers S 210
Rosenau W, Tsoukas CD: Review Article: Lymphotoxin (September) 579
Ross R: *See* Leibovich SJ, Ross R 501
Roth SI, Gallagher MJ: The rapid identification of "normal" parathyroid glands by the presence of intracellular fat (September) 521

Schnappauf H-P: *See* Nelson B, Calvo W, Fliedner TM, Herbst E, Bruch C, Schnappauf H-P, Flad H-D 259
Schoorl R, Brutel de la Rivière A, von dem Borne AEGKr, Feltkamp-Vroom TH: Identification of T and B lymphocytes in human breast cancer with immunohistochemical techniques (September) 529
Scott SK: *See* McLeod CG Jr, Stookey JL, Eddy GA, Scott SK 211
Sher A: *See* von Lichtenberg F, Sher A, Gibbons N, Doughty BL 479
Shimamura T, Trojanowski S: Effects of repeated deprivation of drinking water on the structure of renal medulla of rats (July) 87
Shimizu H: *See* Toth B, Malick L, Shimizu H 69
Shonnard JW: *See* Davis BK, Shonnard JW, Gill TJ III 55
Sidransky H: Symposium: Introduction: The role of nutrition in the pathogenesis of disease (September) 598
Sidransky H: Symposium: Nutritional disturbances of protein metabolism in the liver (September) 649
Sommer JR: *See* Malouf NN, Sommer JR 299

Sommers SC: *See* Gould VE, Sommers SC, Terzakis JA 25
Spang-Thomsen M, Visfeldt J: Animal Model of Human Disease: Malignant tumors (July) 193
Spargo BH: *See* Ordóñez NG, Spargo BH 317
Spicer SS: *See* McKeever PE, Garvin AJ, Hardin DH, Spicer SS 437
Stilmant M: *See* Berman L, Stilmant M, Hayes J 139
Stookey JL: *See* McLeod CG Jr, Stookey JL, Eddy GA, Scott SK 211
Strauss RH, Palmer KC, Hayes JA: Acute lung injury induced by cadmium aerosol. I. Evolution of alveolar cell damage (September) 561

Terzakis JA: *See* Gould VE, Sommers SC, Terzakis JA 25
Toth B, Malick L, Shimizu H: Production of intestinal and other tumors by 1,2-dimethylhydrazine dihydrochloride in mice. I. A light and transmission electron microscopic study of colonic neoplasms (July) 69
Trainin Z: *See* Neumann F, Meirom R, Rattner D, Trainin Z, Klopfer U, Nobel TA 427
Trojanowski S: *See* Shimamura T, Trojanowski S 87
Tsoukas CD: *See* Rosenau W, Tsoukas CD 579

Velosa J, Miller K, Michael AF: Immunopathology of the end-stage kidney: Immunoglobulin and complement deposition in nonimmune disease (July) 149
Visfeldt J: *See* Spang-Thomsen M, Visfeldt J 193
Von dem Borne AEGKr: *See* Schoorl R, Brutel de la Rivière A, von dem Borne AEGKr, Feltkamp-Vroom TM 529
Von Lichtenberg F, Sher A, Gibbons N, Doughty BL: Eosinophil-enriched inflammatory response to schistosomula in the skin of mice immune to *Schistosoma mansoni* (September) 479

Walker DH, Harrison A, Murphy K, Flemister M, Murphy FA: Lymphoreticular and myeloid pathogenesis of Venezuelan equine encephalitis in hamsters (August) 351
Weisbrode SE, Capen CC: Ultrastructural evaluation of the interaction of glucocorticoids and vitamin D on bone cells in thyroparathyroidectomized rats (September) 457
Wiener J: *See* Giacomelli F, Anversa P, Wiener J 111
Worstell J: *See* Ganote CE, Worstell J, Kaltenbach JP 327

Yunis EJ: *See* Good RA, Fernandes G, Yunis EJ, Cooper WC, Jose DC, Kramer TR, Hansen MA 599

The American Journal of PATHOLOGY

OFFICIAL JOURNAL OF
THE AMERICAN ASSOCIATION OF PATHOLOGISTS

Volume 84, 1976

(July through September)

BOARD OF EDITORS
Thomas D. Kinney, Editor-in-Chief
Donald B. Hackel, Associate Editor

Orville T. Bailey
Carl G. Becker
Frederick F. Becker
Baruj Benacerraf
Kurt Benirschke
Colin Bloor
Joel G. Brunson
John R. Carter
Charles G. Cochrane
John M. Craig
Frank J. Dixon, Jr.
John T. Ellis
Emmanuel Farber
Frank W. Fitch
Patrick J. Fitzgerald
David G. Freiman
Jack C. Geer
Thomas J. Gill III
Gabriel Godman
John B. Hazard
T. Carl Jones
Paul Kotin
Averill A. Liebow
Guido Majno
Reginald G. Mason
Donald G. McKay
Councilman Morgan
Richard L. Naeye
Henry C. Pitot
Alan S. Rabson
Goetz W. Richter
David T. Rowlands, Jr.
Edward A. Smuckler
Leon Sokoloff
Benjamin H. Spargo
Lewis Thomas
Jacinto J. Vazquez
F. Stephen Vogel
Peter A. Ward

Editorial Assistant: Virginia Hotelling

THE AMERICAN ASSOCIATION OF PATHOLOGISTS

COPYRIGHT © 1976

BY THE AMERICAN ASSOCIATION OF PATHOLOGISTS

The American Journal of PATHOLOGY

CONTENTS FOR VOLUME 84, 1976

July

1 A Decrease in Cell-Mediated Immunity in Uremia Associated With an Increase in Activity of Suppressor Cells
Jana Raskova and Ashton B. Morrison

11 Gel-Filtered Human Platelets: Ultrastructure, Function, and Role of Proteins in Inhibition of Aggregation by Aspirin
Karen M. Fine, Peter C. Ashbrook, Linda P. Brigden, Jorge E. Maldonado, and Paul Didisheim

25 Squamous Differentiation and Basal Lamina Deposition in Endometrial Adenoacanthoma
Victor E. Gould, Sheldon C. Sommers, and John A. Terzakis

39 Alterations of the Thymus and Other Lymphoid Tissue in Young Horses With Combined Immunodeficiency
Travis C. McGuire, Keith L. Banks, and William C. Davis

55 Genetic Control of the Immune Response to Poly ($Glu^{62}Lys^{33}Tyr^{15}$) in Neonatally Thymectomized High and Low Responder Rats
Bridgett K. Davis, John W. Shonnard, and Thomas J. Gill III

69 Production of Intestinal and Other Tumors by 1,2-Dimethylhydrazine Dihydrochloride in Mice. I. A Light and Transmission Electron Microscopic Study of Colonic Neoplasms
Bela Toth, Linda Malick, and Hidesuke Shimizu

87 Effects of Repeated Deprivation of Drinking Water on the Structure of Renal Medulla of Rats
Tetsuo Shimamura and Sharry Trojanowski

93 Primate Paneth Cell Degeneration Following Methylmercury Hydroxide Ingestion
N. Karle Mottet and Ralph L. Bödy

111 Effect of Angiotensin-Induced Hypertension on Rat Coronary Arteries and Myocardium
Filiberto Giacomelli, Piero Anversa, and Joseph Wiener

139 Streptozotocin and Renal Amyloidosis in the Syrian Hamster
Leonard Berman, Magda Stilmant, and J. A. Hayes

149 Immunopathology of the End-Stage Kidney: Immunoglobulin and Complement Component Deposition in Nonimmune Disease
Jorge Velosa, Kenneth Miller, and Alfred F. Michael

163 REVIEW ARTICLE: The Granulomatous Inflammatory Response
Dolph O. Adams

193 **Animal Model of Human Disease:** Malignant Tumors
M. Spang-Thomsen and J. Visfeldt

197 **Animal Model of Human Disease:** Malignant Hyperthermia
T. E. Nelson, E. W. Jones, and I. L. Anderson

August

201 Pathologic Changes in the Liver and Kidney Produced by Immunization With Intestinal Antigens
Bruce S. Rabin and Susan Rogers

211 Pathology of Chronic Bolivian Hemorrhagic Fever in the Rhesus Monkey
Charles G. McLeod, Jr., James L. Stookey, Gerald A. Eddy, and Stephen K. Scott

225 Age-Related Accumulation of Ceroid-Like Pigment in Mice With Chediak-Higashi Syndrome
Constance Oliver, Edward Essner, Arlene Zimring, and Howard Haimes

239 The Effect of Leukocyte and Platelet Transfusion on the Activation of Intravascular Coagulation by Endotoxin in Granulocytopenic and Thrombocytopenic Rabbits
Elisabeth Bohn and Gert Müller-Berghaus

259 The Repopulation of Lymph Nodes of Dogs After 1200 R Whole-Body X-Irradiation and Intravenous Administration of Mononuclear Blood Leukocytes
Bill Nelson, Wenceslao Calvo, Theodor M. Fliedner, Eberhard Herbst, Christian Bruch, Hans-Peter Schnappauf, and Hans-Dieter Flad

283 Membranoproliferative Glomerulonephritis: Localization of Early Components of Complement in Glomerular Deposits
Bridgett K. Davis and Tito Cavallo

299 Chicken Dystrophy: The Geometry of the Transverse Tubules
Nadia N. Malouf and Joachim R. Sommer

317 The Morphologic Relationship of Light and Dark Cells of the Collecting Tubule in Potassium-Depleted Rats
Nelson G. Ordóñez and Benjamin H. Spargo

327 Oxygen-Induced Enzyme Release After Irreversible Myocardial Injury: Effects of Cyanide in Perfused Rat Hearts
Charles E. Ganote, Jonathan Worstell, and John P. Kaltenbach

351 Lymphoreticular and Myeloid Pathogenesis of Venezuelan Equine Encephalitis in Hamsters
David H. Walker, Alyne Harrison, Kevin Murphy, Mary Flemister, and Frederick A. Murphy

371 REVIEW ARTICLE: The Cytopathology of the Respiratory Tract
William W. Johnston and William J. Frable

425 The American Association of Pathologists and Bacteriologists: Seventy-third Annual Meeting: Business Meeting

427 **Animal Model of Human Disease:** α_1-Antitrypsin Deficiency
F. Neumann, Ruth Meirom, D. Rattner, Z. Trainin, U. Klopfer, T. A. Nobel

431 **Animal Model of Human Disease:** Ulcerative Colitis
Miriam R. Anver and Bennett J. Cohen

September

437 Immune Complex Receptors on Cell Surfaces. II. Cytochemical Evaluation of Their Abundance on Different Immune Cells: Distribution, Uptake, and Regeneration
Paul E. McKeever, A. Julian Garvin, Deborah H. Hardin, and Samuel S. Spicer

457 Ultrastructural Evaluation of the Interaction of Glucocorticoids and Vitamin D on Bone Cells in Thyroparathyroidectomized Rats
Steven E. Weisbrode and Charles C. Capen

469 An *In Vitro* Model of Pancreatic Carcinoma: Morphology and *In Vivo* Growth
Ismail Parsa and Walton H. Marsh

479 Eosinophil-Enriched Inflammatory Response to Schistosomula in the Skin of Mice Immune to *Schistosoma mansoni*
Franz von Lichtenberg, Alan Sher, Naula Gibbons, and Barbara L. Doughty

501 A Macrophage-Dependent Factor That Stimulates the Proliferation of Fibroblasts *In Vitro*
S. J. Leibovich and Russell Ross

515 Effects of Lipemia and Trauma on Experimental Fat Embolism
Franz X. Hausberger

521 The Rapid Identification of "Normal" Parathyroid Glands by the Presence of Intracellular Fat
Sanford I. Roth and Michael J. Gallagher

529 Identification of T and B Lymphocytes in Human Breast Cancer With Immunohistochemical Techniques
Rein Schoorl, Aart Brutel de la Rivière, Albert E. G. Kr. von dem Borne, and Thea M. Feltkamp-Vroom

545 The Adrenal Cortex in Spontaneously Hypertensive Rats: A Quantitative Ultrastructural Study
Peter A. Nickerson

561 Acute Lung Injury Induced by Cadmium Aerosol. I. Evolution of Alveolar Cell Damage
Ruth H. Strauss, K. C. Palmer, and J. A. Hayes

579 REVIEW ARTICLE: Lymphotoxin
Werner Rosenau and Constantine D. Tsoukas

SYMPOSIUM: THE ROLE OF NUTRITION IN THE PATHOGENESIS OF DISEASE

598 Introduction
Herschel Sidransky

599 Nutritional Deficiency, Immunologic Function, and Disease
R. A. Good, G. Fernandes, E. J. Yunis, W. C. Cooper, D. C. Jose, T. R. Kramer, and M. A. Hansen

615 Diet and Atherosclerosis
David Kritchevsky

633 Influence of Dietary Factors on the Pancreatotoxicity of Ethionine
Benito Lombardi

649 Nutritional Disturbances of Protein Metabolism in the Liver
Herschel Sidransky

669 **Animal Model of Human Disease:** Adenosis and Clear-Cell Carcinomas of Vagina and Cervix
John-Gunnar Forsberg

673 **Animal Model of Human Disease:** Carcinoma of the Urinary Bladder in *Schistosoma haematobium* Infection
Allen W. Cheever, Robert E. Kuntz, Jerry A. Moore, George T. Bryan, and Raymond R. Brown

---

677 Index of Subjects, Volume 84

681 Index of Authors, Volume 84

INDEX

SUBJECT

AUTHOR

CONTENTS FOR VOLUME 85

Index of Subjects

Volume 85, 1976

A23187
and mediator release by mast cells, 437
Adenosine
and mediator release by mast cells, 452
Adenosine triphosphate
and platelet aggregation in rat, 581
Adrenalitis
induced by reovirus 3, 595
Aging rats
spontaneous glomerular sclerosis in, 277
Alveoli
pulmonary, factors in diffuse damage to, 210
Alzheimer's disease
limbic system in, 1
Ammonia
and respiratory mycoplasmosis in rats, 115
AMP, cyclic
and mediator release by mast cells, 437
Amygdala
in Alzheimer's disease, 9
Amyloidosis
in mouse line with low leukocyte counts, 49
Animal Models of Human Disease
asplenia in mice, hereditary, 515
diabetes mellitus, 805
lead nephropathy in gerbils, 519
muscular dystrophy in mink, 233
Niemann-Pick disease in mouse, 229
ovarian teratoma, 809
Aortic valve
stenosis of, and intramyocardial arterial lesions, 569
Asplenia
animal model of, 515
Autoradiography
of goiter formation from prostaglandins, 28

Basophils
mediators released from, 437
Blood vessels (*see* vasculature)
Brain
limbic system in Alzheimer's disease, 1

Calcium
and mediator release by mast cells, 450
Capillaries
microangiography in lymph node metastasis, 333
retinal, in experimental hypertension, 263
Carcinogenesis (*see* neoplasia)
Chediak-Higashi syndrome
and granulocyte exudation in mouse, 685
neutrophil microtubule function in, 395
Chemotaxis
in Chediak-Higashi syndrome, 395
eosinophil, regulation of, 419
peptides affecting, 385
Chromosomes
changes related to neoplastic cell transformation, 709
Colon
secretory immunoglobulins in neoplasms of, 303
Computer
for evaluation of histopathologic findings in musculoskeletal disease, 609
Concanavalin A
and mediator release by mast cells, 437
Cornea
melanin in epithelium of, 167
Cyst
tricholemmal, 493
Cytolysis
of experimental tumors, T-lymphocyte mediation of, 661

Dengue hemorrhagic fever
and immunofluorescence of lymphocyte suspensions, 37
Diabetes mellitus
animal model of, 805
Diarrhea
and pancreatic polypeptide in tumors, 675
Down's syndrome
limbic system in, 10

Electron microscopy
of adrenalitis from reovirus 3, 595
of amyloidosis in mouse line with low leukocyte count, 51
of erythroblastemia, experimental, 363
of globoid leukodystrophy in humans and canines, 102
of goiter formation from prostaglandins, 25
of melanin in corneal epithelium, 167
of mesangium in hemolytic-uremic syndrome, 349
of mesothelioma, malignant, 241
of microhemorrhage in thyroid hyperplasia, 317

of myotoxic component from snake venom, 149
of platelet aggregation by ATP, 581
of pulmonary nonciliated cells after nitrosamine, 549
of Reed-Sternberg cells, 195
of retinal capillaries in experimental hypertension, 263
of striated membranous structures in hearts, 85
Environmental factors
in murine respiratory mycoplasmosis, 115
Enzymes
defect in globoid cell leukodystrophy, 99
drug-metabolizing, interacting with chemical carcinogens, 755
lysosomal
in Chediak-Higashi syndrome, 395
peptides affecting, 385
Eosinophils
chemotaxis regulation in, 419
exudation in Chediak-Higashi syndrome, 685
Erythroblastemia
experimental, 363
Erythrocytes
in experimental erythroblastemia, 363
in microhemorrhage in thyroid hyperplasia, 317
Eye
melanin in corneal epithelium, 167
retinal capillaries in experimental hypertension, 263

Fibroma
perifollicular, 498
trichoblastic, 489
Forbus, Wiley Davis, 523
48/80
and mediator release by mast cells, 437
Freeze-fracture studies
of globoid leukodystrophy in humans and canines, 99

Glomerulosclerosis
spontaneous, in aging rats, 277
GMP, cyclic
and Chediak-Higashi PMNs, 395
Goiter
from prostaglandins, 21
Gold Headed Cane Award, 239
Granulocytes
exudation in Chediak-Higashi mouse, 685

Hair
tumors of follicles, 480
Hamartoma
of hair germ, 483
Heart
intramyocardial arterial lesions in aortic stenosis, 569
striated membranous structures in, 85
Hemolytic-uremic syndrome
mesangial injury in, 349
Hemorrhage
microhemorrhage in thyroid hyperplasia, 317
Hepatitis
Types A and B in chimpanzees, 131
Hippocampus
in Alzheimer's disease, 7
Histiocytes
compared to Reed-Sternberg cells, 195
Hodgkin's disease
and ultrastructure of Reed-Sternberg cells, 195
Hypersensitivity
eosinophil chemotaxis in, 419
Hypertension
experimental, retinal capillaries in, 263
spontaneous, in rat, renal medulla in, 555

Immunofluorescence studies
of amyloidosis in mouse line with low leukocyte counts, 51
of lymphocyte suspensions from dengue hemorrhagic fever, 37
Immunoglobulins
and formation of slow-reacting substance, 531
IgE antibody affecting mediator release by mast cells, 437
mesangial IgM deposits in glomerular sclerosis, 277
secretory, in colonic neoplasms, 303
Immunology
antitumor immunity studies, 661
B-cell competence and diversity, 693
phagocyte role in immunity, 465
virus infection affecting immune response, 373
Inflammation
cell biology of, 383
Influenza
macrophage accumulation in, 373
Intestines
secretory immunoglobulins in neoplasms of, 303

Keratosis
follicular, inverted, 499
tricholemmal, 496
Kidney
lead nephropathy, experimental, 519

medulla in spontaneous rat hypertension, 555
mesangium in hemolytic-uremic syndrome, 349
pathology of homograft rejection, 773
spontaneous glomerular sclerosis in aging rats, 277

Lead nephropathy
animal model in gerbils, 519
Leiomyoma
pilar, of hair, 499
Leukemia
murine, virus-induced, spontaneous regression of, 73
Leukocytes
pathology in mouse line with low leukocyte counts, 49
polymorphonuclear (*see* Neutrophils)
Leukodystrophy
globoid, human and canine, 99
Limbic system
in Alzheimer's disease, 1
in Down's syndrome, 10
Liver
carcinogens and enzymes interacting in hepatic cell cultures, 755
epithelial cultures in chemical carcinogenesis studies, 739
hepatitis Types A and B in chmpanzees, 131
Lungs
diffuse alveolar damage, 210
lesions in mycoplasmosis from ammonia, 115
nonciliated cell changes after nitrosamine, 549
oxygen affecting, in newborn, 623
Lymph nodes
metastases in, microangiography of, 333
Lymphocytes
B-cell competence and diversity, 693
suspensions from dengue hemorrhagic fever, immunofluorescence of, 37
T-lymphocyte mediation of cytolysis of experimental tumors, 6611
transformed, compared to Reed-Sternberg cells, 195
Lysosomal enzyme secretion
in Chediak-Higashi syndrome, 395
peptides affecting, 385

Macrophages
accumulation in influenza, 373
and regulation of immunity, 465
Mamillary bodies
in Alzheimer's disease, 9
Mast cells
mediators released from, 437
Melanin
in corneal epithelium, 167
Membranous structures
striated, in heart, 85
Mesangium
in hemolytic-uremic syndrome, 349
IgM deposits in glomerular sclerosis, 277
Mesothelioma
malignant, ultrastructure of, 241
Microcirculation
of lymph node metastases, 333
retinal capillaries in experimental hypertension, 263
Microhemorrhage
in thyroid hyperplasia, 317
Microtubules, neutrophil
in Chediak-Higashi syndrome, 395
and chemotaxis, 391
Muscle
computer evaluation of histopathologic findings in disease, 609
dystrophy of, animal model of, 233
myotoxic component isolated from snake venom, 149
Mycoplasmosis
respiratory, from ammonia, 115
Myxoma
trichogenic, 490

Neoplasia
cell-carcinogen interaction in tissue culture, 706
chromosome changes and cell transformation in, 709
factors in pulmonary carcinogenesis, 549
growth related to host regenerative capacity, 183
of hair follicle, 480
microcirculation in lymph node metastases, 333
ovarian teratoma, animal model of, 809
pancreatic polypeptide in pancreatic endocrine tumors, 675
secretory immunoglobulins in colonic neoplasms, 303
T-lymphocyte mediation of cytolysis of experimental tumors, 661
ultrastructure of malignant diffuse mesothelioma, 241
Nephropathy
lead, experimental, 519
Neurology
limbic system in Alzheimer's disease, 1
riboflavin deficiency affecting sciatic nerve fibers, 651
Neutrophils
exudation in Chediak-Higashi mouse, 685

microtubule function in Chediak-Higashi syndrome, 395
peptides affecting, 385
Niemann-Pick disease
animal model of, 229
Nitrosamine
nonciliated cell changes from, 549
Ovaries
teratoma of, animal model of, 809
Oxygen
and diffuse alveolar damage, 210
toxicity in newborn, 623

Pancreatic polypeptide
in pancreatic endocrine tumors, 675
Peptides
and neutrophil function, 385
pancreatic, in pancreatic endocrine tumors, 675
Phagocytes
secretory function of, 465
Phagocytosis
in Chediak-Higashi syndrome, 395
peptides affecting, 385
Platelets
aggregation by ATP in rat, 581
Popper, Hans, 239
Prostaglandins
and goiter formation, 21
and mediator release by mast cells, 437

Radioiodine studies
of goiter formation from prostaglandins, 23
Rattlesnake venom
myotoxic component isolated from, 149
Reed-Sternberg cells
ultrastructure of, 195
Regenerative capacity
in host, and tumor cell maturation, 183
Respiratory tract (*see* lungs)
Reticular cells
hyperplasia in mouse line with low leukocyte counts, 49
Retina
capillaries in experimental hypertension, 263
Riboflavin
deficiency affecting sciatic nerve fibers, 651

Sarcoma
induced, differentiation to benign fibroneural tumor, 183
Sciatic nerve
in riboflavin deficiency, 651
Shock
and diffuse alveolar damage, 210
Slow-reacting substance
formation by immunoglobulins, 531
release by mast cells, 454
Snake venom
myotoxic component isolated from, 149
Spleen
animal model of asplenia, 515

Teratoma
ovarian, animal model of, 809
Theophylline
and mediator release by mast cells, 437
Thyroid gland
goiter from prostaglandins, 21
hyperplasia of, microhemorrhage in, 317
Tissue culture
cell–carcinogen interaction in, 706
Transplantation
renal, rejection of, 773
Trichoadenoma, 500
Trichoblastoma, 488
Trichodiscoma, 497
Trichoepithelioma, 484
Trichofolliculoma, 486
Tricholemmoma, 496
Trichoma, 500
Trichomatricoma, 491
Tumors (*see* neoplasia)

Vasculature
intramyocardial arterial lesions in aortic stenosis, 569
microcirculation of lymph node metastases, 333
retinal capillaries in experimental hypertension, 263
Venom
myotoxic component isolated from, 149
Viral conditions
adrenalitis induced by reovirus 3, 595
dengue antigen on lymphocyte surfaces, 37
hepatitis Types A and B in chimpanzees, 131
macrophage accumulation in influenza, 373
murine leukemia, spontaneous regression of, 73

Index of Authors

Volume 85, 1976

Adachi M, Volk BW, Schneck L: Animal Model of Human Disease: Niemann-Pick disease Type C (October) 229
Akimura OK: *See* Jancar S, Akimura OK, Dias da Silva W 531
Baldwin J: *See* Russo I, Russo J, Baldwin J, Rich MA 73
Becker EL: Some interrelations of neutrophil chemotaxis, lysosomal enzyme secretion, and phagocytosis as revealed by synthetic peptides (November) 385
Becker EL: Symposium: Introduction: The cell biology of inflammation (November) 384
Beller DI: *See* Unanue ER, Beller DI, Calderon J, Kiely JM, Stadecker MJ 465
Benacerraf B: *See* Germain RN, Williams RM, Benacerraf B 661
Bening J: *See* Tavassoli M, Bening J, Houchin D, Crosby WH 363
Bensch KG: *See* Bonikos DS, Bensch KG, Northway WH Jr 623
Benton FR: *See* Bolton WK, Benton FR, Maclay JG, Sturgill BC 277
Bhamarapravati N: *See* Boonpucknavig S, Bhamarapravati N, Nimmannitya S, Phalavadhtana A, Siripont J 37
Bloor CM: *See* Katzenstein AA, Bloor CM, Leibow AA 209
Bolton WK, Benton FR, Maclay JG, Sturgill BC: Spontaneous glomerular sclerosis in aging Sprague-Dawley rats. I. Lesions associated with mesangial IgM deposits (November) 277
Bonikos DS, Bensch KG, Northway WH Jr: Oxygen toxicity in the newborn: The effect of chronic continuous 100 percent oxygen exposure on the lungs of newborn mice (December) 623
Boonpucknavig S, Bhamarapravati N, Nimmannitya S, Phalavadhtana A, Siripont J: Immunofluorescent staining of the surfaces of lymphocytes in suspensions from patients with dengue hemorrhagic fever (October 37
Brandt EJ: *See* McGarry MP, Brandt EJ, Swank RT 685
Broderson JR, Lindsey JR, Crawford JE: The role of environmental ammonia in respiratory mycoplasmosis of rats (October) 115
Buono RA: *See* Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Calderon J: *See* Unanue ER, Beller DI, Calderon J. Kiely JM, Stadecker MJ 465
Cameron D: *See* Ownby CL, Cameron D, Tu AT 149
Cancilla PA: *See* Suffin SC, Cancilla PA, Kasdan HL 609
Cantin M: *See* Forthomme D, Cantin M 263
Chai CK: Reticular cell hyperplasia and amyloidosis in a line of mice with low leukocyte counts (October) 49
Chance RE: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muchkadell O, Moon N .. 675
Churg J: *See* Shigematsu H, Dikman SH, Churg J, Grishman E, Duffy JL 349
Churg J: *See* Suzuki Y, Churg J, Kannerstein M 241
Collins RD: *See* Glick AD, Leech JH, Flexner JM, Collins RD 195
Crawford JE: *See* Broderson JR, Lindsey JR, Crawford JE 115
Crosby WH: *See* Tavassoli M, Bening J, Houchin D, Crosby WH 363
Custer RP: *See* Outzen HC, Custer RP 183
D'Agostini RJ: *See* Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Daniels CA: *See* Kleinerman ES, Daniels Ca, Polisson RP, Synderman R 373
Daskal I: *See* Norton WN, Daskal I, Savage HE, Seibert RA, Lane M 651
De Sousa MAB: *See* Herman PG, Kim C-S, De Sousa MAB, Mellins HZ 333
Dias da Silva W: *See* Jancar S, Akimura OK, Dias da Silva W 531
Dienstag JL, Popper H, Purcell RH: The pathology of viral hepatitis Types A and B in chimpanzees (October) 131
Dikman SH: *See* Shigematsu H, Dikman SH, Churg J, Grishman E, Duffy JL 349
DiPaolo JA, Popsescu NC: Relationship of chromosome changes to neoplastic cell transformation (December) 709

Duffy JL: *See* Shigematsu H, Dikman SH, Churg J, Grishman E, Duffy JL 349
Fahrenkrug J: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Ferrans VJ: *See* Renteria VG, Ferrans VJ, Jones M 85
Finer PM: *See* Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Flexner JM: *See* Glick AD, Leech JH, Flexner JM, Collins RD 195
Forthomme D, Cantin M: The retinal capillaries of the rat in deoxycorticosterone hypertension: An ultrastructural study with the diffusion tracer lanthanum (November) 263
Germain RN, Williams RM, Benacerraf B: Specific and nonspecific antitumor immunity. III. Specific T lymphocyte–mediated cystolysis of P815 mastocytoma and SL2 lymphoma by draining lymph node cells from syngeneic tumor-bearbearing DBA/J mice (December 661
Glick AD, Leech JH, Flexner JM, Collins RD: Ultrastructural study of Reed-Sternberg cells: Comparison with transformed lymphocytes and histiocytes (October) 195
Goetzel EJ: Modulation of human eosinophil polymorphonuclear leukocyte migration and function (November 419
Gorham JE: *See* Hegregberg GA, Norton SL, Gorham JR 233
Grimelius L: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfield JF, Grimelius L. Fahrenkrug J, Schaffalitzky de Muckaldell O, Moon N 675
Grishman E: *See* Shigematsu H, Dikman SH, Churg J, Grishman E, Duffy JL 349
Headington JT: Review Article: Tumors of the hair follicile (November) 479
Hegreberg GA, Norton SL, Gorham JR: Animal Model of Human Disease: Muscular dystrophy (October 233
Heptinstall RH: *See* Solez K, D'Agostini RJ, Buona RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Herman PG, Kim C-S, De Sousa MAB, Mellins HZ: Microcirculation of the lymph node with metastases (November) 333
Hill GS: *See* Rowlands DT Jr, Hill GS, Zmijewski CM 773
Hooper MW, Vogel FS: The limbic system in Alzheimer's disease (October) 1
Houchin D: *See* Tavassoli M, Bening J, Houchin D, Crosby WH 363
Jancar S, Akimura OK, Dias da Silva W: Formation of slow-reacting substance by guinea pig immunoglobulins (December) 531
Jones M: *See* Renteria VG, Ferrans VJ, Jones M 85
Kannerstein M: *See* Suzuki Y, Churg J, Kannerstein M 241
Kasdan HL: *See* Suffin SC, Cancilla PA, Kasdan HL 609
Katzenstein AA, Bloor CM, Leibow AA: Review Article: Diffuse alveolar damage—The role of oxygen, shock, and related factors (October) 209
Kiely JM: *See* Unanue ER, Beller DI, Calderon J, Kiely JM, Stadecker MJ 465
Kim C-S: *See* Herman PG, Kim C-S, De Sousa MAB, Mellins HZ 333
King DW: Presentation of Gold Headed Cane Award to Hans Popper (November) ... 237
Kleinerman ES, Daniels CA, Polisson RP, Snyderman R: Effect of virus infection on the inflammatory response: Depression of macrophage accumulation in influenza-infected mice (November) 373
Klinman NR: Parke-Davis Award Lecture: The acquisition of B-cell competence and diversity (December) 693
Klintworth GK: See McCracken JS, Klintworth GK 167
Lamm ME: *See* Weisz-Carrington P, Poger ME, Lamm ME 303
Lane M: *See* Norton WN, Daskal I, Savage HE, Seibert RA, Lane M 651
Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N: Occurrence of human pancreatic polypeptide in pancreatic endocrine tumors: Possible implication in the watery diarrhea syndrome (December) 675
Lee RE: *See* Yunis EJ, Lee RE 99
Leech JH: *See* Glick AD, Leech JH, Flexner JM, Collins RD 195
Leibow AA: *See* Katzenstein AA, Blood CM, Leibow AA 209
Liedtke AJ: *See* Naeye RL, Liedtke AJ 569

Lindsey JR: *See* Broderson JR, Lindsey JR, Crawford JE 99
Lozzio BB: *See* Machado EA, Lozzio BB 515
Lundqvist G: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Lupulescu A: Goiter formation following prostaglandin administration in rats (October) 21
Machado EA, Lozzio BB: Animal Model of Human Disease: Hyposplenia and asplenia and immunodeficiency (November) 515
Maclay JG: *See* Bolton WK, Benton FR, Maclay JG, Sturgill BC 277
McCracken JS, Klintworth GK: Ultrastructural observations on experimentally produced melanin pigmentation of the corneal epithelium (October) 167
McGarry MP, Brandt EJ, Swank RT: Eosinophil and neutrophil granulocyte exudation in the Chediak-Higashi (beige) mouse (December) 685
Mellins HZ: *See* Herman PG, Kim C-S, De Sousa MAB, Mellins HZ 333
Michalopoulos G, Sattler G, Sattler C, Pitot HC: Interaction of chemical carcinogens and drug-metabolizing enzymes in primary cultures of hepatic cells from the rat (December) 755
Moon N: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Naeye RL, Liedtke AJ: Consequences of intramyocardial arterial lesions in aortic valvular stenosis (December) 569
Nimmannitya S: *See* Boonpucknavig S, Bhamarapravati N, Nimmannitya S, Phalavadhtana A, Siripont J 37
Northway WH Jr: *See* Bonikos DS, Bensch KG, Northway WH Jr 623
Norton SL: *See* Hegreberg GA, Norton SL, Gorham JR 233
Norton WN, Daskal I, Savage HE, Seibert RS, Lane M: Effects of riboflavin deficiency on the ultrastructure of rat sciatic nerve fibers (December) 651
Oliver JM: Impaired microtubule function correctable by cyclic GMP and cholinergic agonists in the Chediak-Higashi syndrome (November) 395
Outzen HC, Custer RP: Differentiation of a methylcholanthrene-induced sarcoma to a benign plexiform fibroneural tumor in an adult frog (October) 183
Ownby CL, Cameron D, Tu AT: Isolation of myotoxic component from rattlesnake venom (October) 149
Papadimitriou JM, Robertson TA: Acute murine adrenalitis induced by reovirus 3 (December) 595
Parker CW: *See* Sullivan TJ, Parker CW 437
Phalavadhtana A: *See* Boonpucknavig S, Bhamarapravati N, Nimmannitya S, Phalavadhtana A, Siripont J 37
Pitot HC: Symposium: Introduction: Cell-carcinogen interaction in tissue culture (December) 706
Pitot HC: *See* Michalopoulos G, Sattler G, Sattler C, Pitot HC 755
Poger ME: *See* Weisz-Carrington P, Poger ME, Lamm ME 303
Polisson RP: *See* Kleinerman ES, Daniels CA, Polisson RP, Snyderman R 373
Popescu NC: *See* DiPaolo JA, Popescu NC 709
Popper H: *See* Dienstag JL, Popper H, Purcell RH 131
Port CD: Animal Model of Human Disease: Acute and chronic lead nephropathy (November) 519
Purcell RH: *See* Dienstag JL, Popper H, Purcell RH 131
Race GJ: Wiley Davis Forbus, 1894–1976 (December) 523
Rehfeld JF: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Rentería VG, Ferrans VJ, Jones M: Striated membranous structures in human hearts (October) 85
Reznik-Schüller H: Ultrastructural alterations of nonciliated cells after nitrosamine treatment and their significance for pulmonary carcinogenesis (December) 549
Rich MA: *See* Russo I, Russo J, Baldwin J, Rich MA 73
Robertson TA: *See* Papadimitriou JM, Robertson TA 595
Rowlands DT Jr, Hill GS, Zmijewski CM: Review Article: The pathology of renal homograft rejection (December) 773

Russo I, Russo J, Baldwin J, Rich MA: Histopathology of spontaneous regression in virus-induced murine leukemia (October) 73
Russo J: *See* Russo I, Russo J, Baldwin J, Rich MA 73
Sattler C: *See* Michalopoulos G, Sattler G, Sattler C, Pitot HC 755
Sattler G: *See* Michalopoulos G, Sattler G, Sattler C, Pitot HC 755
Savage HE: *See* Norton WN, Daskal I, Savage HE, Seibert RA, Lane M 651
Schaffalitzky de Muckadell O: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Schneck L: *See* Adachi M, Volk BW, Schneck L 229
Schwartz T: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Seibert RA: *See* Norton WN, Daskal I, Savage HE, Seibert RA, Lane M 651
Shigematsu H, Dikman SH, Churg J, Grishman E, Duffy JL: Mesangial involvement in hemolytic-uremic syndrome (November) 349
Siripont J: *See* Boonpucknavig S, Bhamarapravati N, Nimmannitya S, Phalavadhtana A, Siripont J 37
Snyderman R: *See* Kleinerman ES, Daniels CA, Polisson RP, Snyderman R 373
Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH: The renal medulla and mechanisms of hypertension in the spontaneously hypertensive rat (December) 555
Stadecker MJ: *See* Unanue ER, Beller DI, Calderon J, Kiely JM, Stadecker MJ 465
Stevens LC: Animal Model of Human Disease: Benign cystic and malignant ovarian teratoma (December) 809
Sturgill BC: *See* Bolton WK, Benton FR, Maclay JG, Sturgill BC 277
Suffin SC, Cancilla PA, Kasdan HL: Feasibility of computer evaluation of the histopathologic findings in human skeletal muscle disease (December) 609
Sullivan TJ, Parker CW: Pharmacologic modulation of inflammatory mediator release by rat mast cells (November) 437
Sundler F: *See* Larsson L-I, Schwartz T, Lundqvist G, Chance RE, Sundler F, Rehfeld JF, Grimelius L, Fahrenkrug J, Schaffalitzky de Muckadell O, Moon N 675
Suzuki Y, Churg J, Kannerstein M: Ultrastructure of human malignant diffuse mesothelioma (November) 241
Swank RT: *See* McGarry MP, Brandt EJ, Swank RT 685
Tavassoli M, Bening J, Houchin D, Crosby WH: Experimental induction of erythroblastemia using intravenous carbonyl iron particles (November) 363
Ts'ao C-h: Rat platelet aggregation by ATP: Aggregometrical and ultrastructural comparison with aggregations induced by ADP and collagen (December) 581
Tu AT: *See* Ownby CL, Cameron D, Tu AT 149
Unanue ER, Beller DI, Calderon J, Kiely JM, Stadecker MJ: Regulation of immunity and inflammation by mediators from macrophages (November) 465
Vernon N: *See* Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Vogel FS: *See* Hooper MW, Vogel FS 1
Volk BW: *See* Adachi M, Volk BW, Schneck L 229
Wang AL: *See* Solez K, D'Agostini RJ, Buono RA, Vernon N, Wang AL, Finer PM, Heptinstall RH 555
Weisz-Carrington P, Poger ME, Lamm ME: Secretory immunoglobulins in colonic neoplasms (November) 303
Williams GM: The use of liver epithelial cultures for the study of chemical carcinogenesis (December) 739
Williams RM: *See* Germain RN, Williams RM, Benacerraf B 661
Wolf S: Animal Model of Human Disease: Diabetes mellitus (December) 805
Wollman SH: *See* Zeligs JD, Wollman SH 317
Yunis EJ, Lee RE: The morphologic similarities of human and canine globoid leukodystrophy (October) 99
Zeligs JD, Wollman SH: Microhemorrhage in the hyperplastic thyroid gland of the rat (November) 317
Zmijewski CM: *See* Rowlands DT Jr, Hill GS, Zmijewski CM 773

The American Journal of PATHOLOGY

OFFICIAL JOURNAL OF
THE AMERICAN ASSOCIATION OF PATHOLOGISTS

Volume 85, 1976

(October through December)

BOARD OF EDITORS
Thomas D. Kinney, Editor-in-Chief
Donald B. Hackel, Associate Editor

Orville T. Bailey
Carl G. Becker
Frederick F. Becker
Baruj Benacerraf
Kurt Benirschke
Colin Bloor
Joel G. Brunson
John R. Carter
Charles G. Cochrane
John M. Craig
Frank J. Dixon, Jr.
John T. Ellis
Emmanuel Farber
Frank W. Fitch
Patrick J. Fitzgerald
David G. Freiman
Jack C. Geer
Thomas J. Gill III
Gabriel Godman
John B. Hazard
T. Carl Jones
Paul Kotin
Averill A. Liebow
Guido Majno
Reginald G. Mason
Donald G. McKay
Councilman Morgan
Richard L. Naeye
Henry C. Pitot
Alan S. Rabson
Goetz W. Richter
David T. Rowlands, Jr.
Edward A. Smuckler
Leon Sokoloff
Benjamin H. Spargo
Lewis Thomas
Jacinto J. Vazquez
F. Stephen Vogel
Peter A. Ward

Editorial Assistant: Virginia Hotelling

THE AMERICAN ASSOCIATION OF PATHOLOGISTS

COPYRIGHT © 1976

BY THE AMERICAN ASSOCIATION OF PATHOLOGISTS

The American Journal of PATHOLOGY

CONTENTS FOR VOLUME 85, 1976

October

1 The Limbic System in Alzheimer's Disease: A Neuropathologic Investigation
Mildred W. Hooper and F. Stephen Vogel

21 Goiter Formation Following Prostaglandin Administration in Rats
A. Lupulescu

37 Immunofluorescent Staining of the Surfaces of Lymphocytes in Suspension From Patients With Dengue Hemorrhagic Fever
Somnate Boonpucknavig, Natth Bhamarapravati, Suchitra Nimmannitya, Auranut Phalavadhtana, and Janya Siripont

49 Reticular Cell Hyperplasia and Amyloidosis in a Line of Mice With Low Leukocyte Counts
C. K. Chai

73 Histopathology of Spontaneous Regression in Virus-Induced Murine Leukemia
Irma Russo, Jose Russo, James Baldwin, and Marvin A. Rich

85 Striated Membranous Structures in Human Hearts: An Ultrastructural Study
Vicente G. Renterla, Victor J. Ferrans, and Michael Jones

99 The Morphologic Similarities of Human and Canine Globoid Leukodystrophy: Thin Section and Freeze-Fracture Studies
Eduardo J. Yunis and Robert E. Lee

115 The Role of Environmental Ammonia in Respiratory Mycoplasmosis of Rats
J. Roger Broderson, J. Russell Lindsey, and James E. Crawford

131 The Pathology of Viral Hepatitis Types A and B in Chimpanzees: A Comparison
Jules L. Dienstag, Hans Popper, and Robert H. Purcell

149 Isolation of Myotoxic Component From Rattlesnake (*Crotalus viridis viridis*) Venom: Electron Microscopic Analysis of Muscle Damage
Charlotte L. Ownby, David Cameron, and Anthony T. Tu

167 Ultrastructural Observations on Experimentally Produced Melanin Pigmentation of the Corneal Epithelium
J. Stuart McCracken and Gordon K. Klintworth

183 Differentiation of a Methylcholanthrene-Induced Sarcoma to a Benign Plexiform Fibroneural Tumor in an Adult Frog (*Rana pipiens*): Possible Influence of Host Regenerative Capacity
Henry C. Outzen and R. Philip Custer

195 Ultrastructural Study of Reed-Sternberg Cells: Comparison With Transformed Lymphocytes and Histiocytes
Alan D. Glick, J. H. Leech, J. M. Flexner, and R. D. Collins

209 REVIEW ARTICLE: Diffuse Alveolar Damage—The Role of Oxygen, Shock, and Related Factors
Anna-Luise A. Katzenstein, Colin M. Bloor, and Averill A. Leibow

229 **Animal Model of Human Disease:** Niemann-Pick Disease Type C
M. Adachi, B. W. Volk, and L. Schneck

233 **Animal Model of Human Disease:** Muscular Dystrophy
G. A. Hegreberg, S. L. Norton, and J. R. Gorham

November

237 Presentation of the Gold Headed Cane to Hans Popper
Donald W. King

241 Ultrastructure of Human Malignant Diffuse Mesothelioma
Yasunosuke Suzuki, Jacob Churg, and Milton Kannerstein

263 The Retinal Capillaries of the Rat in Deoxycorticosterone Hypertension: An Ultrastructural Study With the Diffusion Tracer Lanthanum
Daniel Forthomme and Marc Cantin

277 Spontaneous Glomerular Sclerosis in Aging Sprague-Dawley Rats. I. Lesions Associated With Mesangial IgM Deposits
W. Kline Bolton, F. Ridgely Benton, J. Gary Maclay, and Benjamin C. Sturgill

303 Secretory Immunoglobulins in Colonic Neoplasms
Paul Weisz-Carrington, Marshall E. Poger, and Michael E. Lamm

317 Microhemorrhage in the Hyperplastic Thyroid Gland of the Rat
Joseph D. Zeligs and Seymour H. Wollman

333 Microcirculation of the Lymph Node With Metastases
Peter G. Herman, Chang-Se Kim, Maria A. B. de Sousa, and Harry Z. Mellins

349 Mesangial Involvement in Hemolytic-Uremic Syndrome: A Light and Electron Microscopic Study
Hidekazu Shigematsu, Steven H. Dikman, Jacob Churg, Edith Grishman, and John L. Duffy

363 Experimental Induction of Erythroblastemia Using Intravenous Carbonyl Iron Particles
Mehdi Tavassoli, Jane Bening, Donald Houchin, and William H. Crosby

373 Effect of Virus Infection on the Inflammatory Response: Depression of Macrophage Accumulation in Influenza-Infected Mice
E. S. Kleinerman, C. A. Daniels, R. P. Polisson, and R. Snyderman

SYMPOSIUM: THE CELL BIOLOGY OF INFLAMMATION

384 Introduction
Elmer L. Becker

385 Some Interrelations of Neutrophil Chemotaxis, Lysosomal Enzyme Secretion, and Phagocytosis as Revealed by Synthetic Peptides
Elmer L. Becker

395 Impaired Microtubule Function Correctable by Cyclic GMP and Cholinergic Agonists in the Chediak-Higashi Syndrome
Janet M. Oliver

419 Modulation of Human Eosinophil Polymorphonuclear Leukocyte Migration and Function
Edward J. Goetzl

437 Pharmacologic Modulation of Inflammatory Mediator Release by Rat Mast Cells
Timothy J. Sullivan and Charles W. Parker

465 Regulation of Immunity and Inflammation by Mediators From Macrophages
Emil R. Unanue, David I. Beller, Jesus Calderon, Jeanne Marie Kiely, and Miguel J. Stadecker

479 REVIEW ARTICLE: Tumors of the Hair Follicle
John T. Headington

515 **Animal Model of Human Disease:** Hyposplenia, Asplenia, and Immunodeficiency
Emilio A. Machado and Bismarck B. Lozzio

519 **Animal Model of Human Disease:** Acute and Chronic Lead Nephropathy
Curtis D. Port

December

523 Wiley Davis Forbus, 1894–1976
George J. Race

531 Formation of Slow-Reacting Substance by Guinea Pig Immunoglobulins
Sonia Jancar, Olga K. Akimura, and W. Dias da Silva

549 Ultrastructural Alterations of Nonciliated Cells After Nitrosamine Treatment and Their Significance for Pulmonary Carcinogenesis
Hildegard Reznik-Schüller

555 The Renal Medulla and Mechanisms of Hypertension in the Spontaneously Hypertensive Rat
Kim Solez, Robert J. D'Agostini, Ronald A. Buono, Nancy Vernon, Ann L. Wang, Paul M. Finer, and Robert H. Heptinstall

569 Consequences of Intramyocardial Arterial Lesions in Aortic Valvular Stenosis
Richard L. Naeye and A. James Liedtke

581 Rat Platelet Aggregation by ATP: Aggregometrical and Ultrastructural Comparison With Aggregations Induced by ADP and Collagen
Chung-hsin Ts'ao

595 Acute Murine Adrenalitis Induced by Reovirus 3: An Ultrastructural Study
J. M. Papadimitriou and T. A. Robertson

609 Feasibility of Computer Evaluation of the Histopathologic Findings in Human Skeletal Muscle Disease
Stephen C. Suffin, Pasquale A. Cancilla, and Harvey L. Kasdan

623 Oxygen Toxicity in the Newborn: The Effect of Chronic Continuous 100 Percent Oxygen Exposure on the Lungs of Newborn Mice
Dionysis S. Bonikos, Klaus G. Bensch, and William H. Northway, Jr.

651 Effects of Riboflavin Deficiency on the Ultrastructure of Rat Sciatic Nerve Fibers
William N. Norton, Ierachmiel Daskal, Howard E. Savage, Richard A. Seibert, and Montague Lane

661 Specific and Nonspecific Antitumor Immunity. III. Specific T Lymphocyte–Mediated Cytolysis of P815 Mastocytoma and SL2 Lymphoma by Draining Lymph Node Cells From Syngeneic Tumor-Bearing DBA/2J Mice
Ronald N. Germain, R. Michael Williams, and Baruj Benacerraf

675 Occurrence of Human Pancreatic Polypeptide in Pancreatic Endocrine Tumors: Possible Implication in the Watery Diarrhea Syndrome
L.-I. Larsson, T. Schwartz, G. Lundqvist, R. E. Chance, F. Sundler, J. F. Rehfeld, L. Grimelius, J. Fahrenkrug, O. Schaffalitzky de Muckadell, and N. Moon

685 Eosinophil and Neutrophil Granulocyte Exudation in the Chediak-Higashi (Beige) Mouse
M. P. McGarry, E. J. Brandt, and R. T. Swank

693 PARKE-DAVIS AWARD LECTURE: The Acquisition of B-Cell Competence and Diversity
Norman R. Klinman

SYMPOSIUM: CELL–CARCINOGEN INTERACTION IN TISSUE CULTURE

706 Introduction
Henry C. Pitot

709 Relationship of Chromosome Changes to Neoplastic Cell Transformation
Joseph A. DiPaolo and Nicolae C. Popescu

739 The Use of Liver Epithelial Cultures for the Study of Chemical Carcinogenesis
Gary M. Williams

755 Interaction of Chemical Carcinogens and Drug-Metabolizing Enzymes in Primary Cultures of Hepatic Cells From the Rat
George Michalopoulos, Gerald Sattler, Carol Sattler, and Henry C. Pitot

773 REVIEW ARTICLE: The Pathology of Renal Homograft Rejection
David T. Rowlands, Jr., Gary S. Hill, and Chester M. Zmijewski

805 **Animal Model of Human Disease:** Diabetes Mellitus
Stewart Wolf

809 **Animal Model of Human Disease:** Benign Cystic and Malignant Ovarian Teratoma
Leroy C. Stevens

813 Index of Subjects, Volume 85

818 Index of Authors, Volume 85